When Accuracy Counts

DC-200/300

Counting Scale

Version 21.51

Operation Manual

RICE LAKE WEIGHING SYSTEMS
Commitment Beyond Measurement®

ISO 9001 REGISTERED

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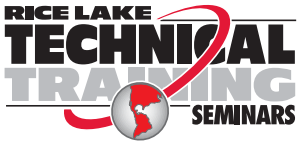

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About This Manual

This manual contains operating procedures for the DC-200/300 counting scales and provides the user with all the information necessary for setup and operation. It is organized based on the procedures you will likely follow when setting up and using your counting scale. This manual applies to Version 21.51 of the DC-200/300 counting scale series.

Caution *Some procedures described in this manual require work inside the scale base. These procedures are to be performed by qualified service personnel only.*

Authorized distributors and their employees can view or download this manual from the DIGI distributor site at **www.DigiScales.com**.

1.0 Introduction

The DC-200/300 counting scale offers practical solutions for a full range of precision counting applications. A bright dot matrix LCD display enables operators to easily view quantities, and a second line of alphanumeric text messaging displays operator prompts and part numbers to enable job sequencing. Four thousand item memory, three standard RS-232 interfaces and Ethernet connectivity enable the DC-200/300 Series to provide real-time data collection and position it for the future growth of your business. Multiple scales can be connected to the DC-200/300, as well as bar code scanners, external printers and keyboards, making it the hub of a sophisticated weighing system. The DC-300's built-in direct thermal printer instantaneously generates labels and allows you to produce reports such as item, inventory and shelf location. Its ninety-nine custom label formats provide the flexibility to create labels containing only the information needed for each application. When portability is required, choose the battery operation option of the DC-200 for over 10 hours of continuous use for mobile workstations, outdoor applications, and rental fleets. It's built to withstand transport from one area of the plant to another or from one business to the next. Simply connect a printer via RS-232 for labeling tasks.

1.1 Capacities and Resolutions

Table 1-1 and Table 1-2 list the scale capacities and resolutions for all models of the DC-200/300 counting scales. The system weighing accuracy is 0.02 percent.

Counting scales specify two types of resolution:

- Weight (or external) resolution
- Counting (or internal) resolution

Weight resolution is displayed in divisions of the full scale capacity which is divided into weight increments. For example, a 5-lb scale divided into 10,000 display divisions would display weight with 0.0005 lb divisions (10,000 divisions x 0.0005 lb = 5.0 lb).

Counting resolution is based on the internal resolution of the scale. The weight and counting resolutions for the DC-200/300 capacities are shown below and apply to all models of DC-200/300 counting scales.

DC-200/300 Single Scale

Note: *Units are selectable from lb to kg and can be programmed to weigh in other primary units: lb, kg, g.*

Capacity	Mounting Internal/External	Weight Resolution	Counting Resolution	Platform Dimension
1.0 lb	Both	0.0001	0.000001	6" x 8"
2.5 lb	Both	0.0002	0.000002	7" x 10"
5.0 lb	Both	0.0005	0.000005	12" x 14"
10.0 lb	Both	0.001	0.00001	12" x 14"
25.0 lb	Both	0.002	0.00002	12" x 14"
50.0 lb	Both	0.005	0.00005	12" x 14"

Table 1-1. DC-200/300 Single Scale Capacities

DC-200/300 Remote Platforms

Platform Capacity	Weight Resolution	Counting Resolution	Platform Dimensions
100.00	0.01	0.0001	13" x 17" (DIGI S-SL Platform)
250.00	0.02	0.0002	17" x 21" * (DIGI S-TL Platform)
500.00	0.05	0.0005	17" x 21" * (DIGI S-TL Platform)
1500.0	0.2	0.001	24" x 28" * (DIGI S-UL Platform)
2500.0	0.2	0.002	36" x 36" or 48" x 48" * (DIGI Summit 3000 Platform)
5000.0	0.5	0.005	48" x 48" * (DIGI Summit 3000 Platform)
10000.0	1.0	0.01	48" x 48" or 60" x 60" * (DIGI Summit 3000 Platform)
25000.0	2.0	0.02	42" x 72" or 60" x 84" * (DIGI Summit 3000 Platform)
50000.0	5.0	0.05	60" x 84" * (DIGI Summit 3000 Platform)
***Note:** Other platform sizes are available; consult the factory or your dealer for more information. Units are selectable from lb to kg and can be programmed to weigh in other primary units: lb, kg, g.*			

Table 1-2. DC-200/300 External Platform Capacities

1.2 Modes of Operation

1.2.1 Description of Modes of Operation

The DC-200/300 has four main modes of operation:

- Operation Mode – where all the basic weighing and counting operations are performed (also called the Registration Mode).
- Report Mode – where item, inventory, and shelf location reports can be printed.
- Program Mode –where item data, factory name, and other data can be programmed into the memory of the scale.
- Password Mode – where you can set passwords that will be required for a scale operator to use certain functions of the scale.

A fifth mode of operation, Service Mode, is used by your DIGI Dealer or authorized service technician to perform initial programming and troubleshooting operations.

Which mode you are in is displayed on the right-hand side of the display panel by the following codes:

Mode	Annunciator
Operation Mode	Default mode, no letter displayed
Report Mode	X
Program Mode	S
Password Mode	The code for the mode you are password protecting is displayed
Service Mode	Z

Table 1-3. DC-200/300 Modes of Operation

DC-200/300 Mode Flowchart

The chart below shows the functions under each of the DC-200/300 modes. Use the **Mode** key to switch between modes. Once you are in a particular mode, use the **+** and **–** keys to move between the different functions for that mode.

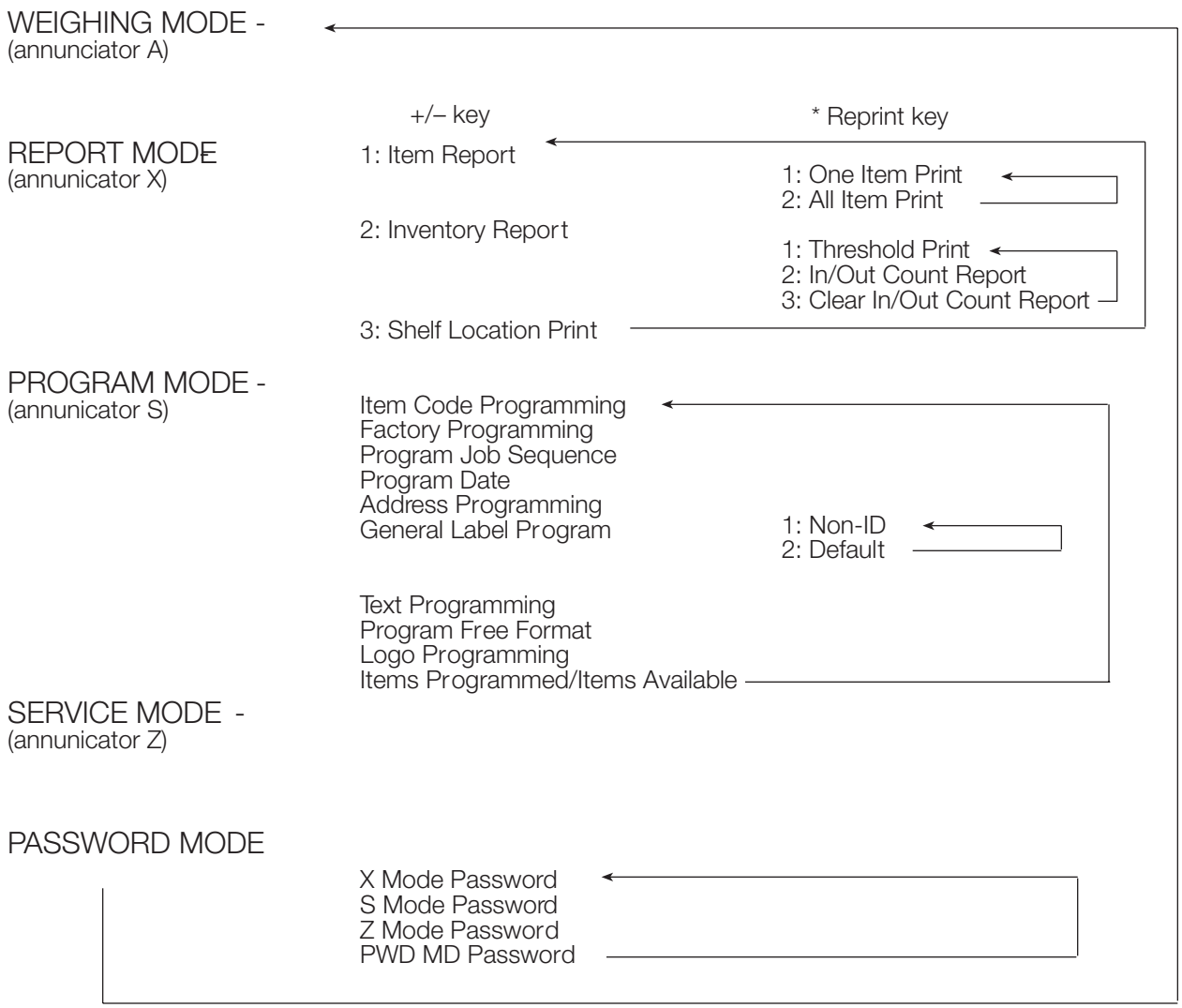


Figure 1-1. Mode Flowchart

1.3 Keyboard and Display

Figure 1-2 shows the DC-200/300 console with annunciators, the alphanumeric keyboard and the numeric keypad. Annunciators are described in Section 1.3.1. Section 1.3.2 describes the DC-200/300 keyboard and keypad.

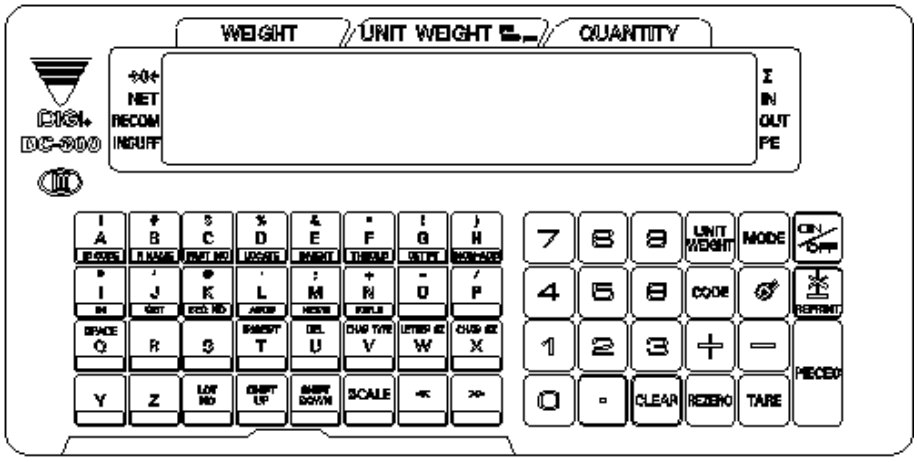


Figure 1-2. DC-200/300 Display

1.3.1 Annunciators

Table 1-4 shows a list of the annunciators that the DC-200/300 uses to provide additional information about the value being displayed. The annunciators are illuminated when the specific function is being performed.

Annunciator	Annunciator Meaning
▯ 0 ▯	Gross weight is zero
NET	Display shows net weight (when tare weight is entered or recalled)
RECOM	Unit weight is recomputing is possible
INSUFF	Net weight is below specified percentage of scale capacity
▯	Memory indicator showing quantity accumulation is being done
IN	Inventory IN (for counting mode)
OUT	Inventory OUT (for counting mode)
PE	Paper end.
R	Scale is in Registration Mode, also referred to as Operation Mode. (see Section 1.2 for description of modes)
S	Scale is in Programming Mode. (see Section 1.2 for description of modes)
X	Scale is in Report Mode. (see Section 1.2 for description of modes)
Z	Scale is in Service Mode. (see Section 1.2 for description of modes)

Table 1-4. DC-200/300 Annunciators and Function

1.3.2 Key Functions

The DC-200/300 features a full alphanumeric keyboard with many functions for managing inventory information and scale operation. Table 1-5 lists the keys and key functions of the DC-200/300 keyboard and keypad (see Figure 1-2 above).

Note: *Some keys have different functions depending on what mode you are in, so be sure to check which mode is selected before using them*

.

Key	Description
ON/OFF	Turns the scale display on or off
0 to 9	Used to enter numeric values. When using the scale, first enter a numeric value, then press the appropriate function key.
MODE	Allows cycling between the different modes: • Operation Mode – weighing and counting operations • Report Mode – print item, inventory, and shelf location reports • Program Mode – entering item data, factory name • Password Mode – password protecting certain operations • Service Mode -setup and troubleshooting by an authorized dealer or technician
TARE	• Operation Mode – set and clear tare weights • Program Mode – do an item test print • Other Modes – used to select “No”
CLEAR	• Operation Mode – clear keyed-in data from the display starting with the last digit entered • Other Modes – used to select “Yes”
REZERO	Used to reset the scale to zero. Also used in conjunction with other keys to enter the maintenance mode. The **REZERO** key does not function when the scale is in motion.
PIECES	• Operation Mode - compute unit weight by sampling. Press the **PIECES** key after placing a 10-piece sample on the platform, or after using the numeric keypad to enter the sample size. On multi-channel units, ensure that the correct scale is selected. • Other Modes - escape the programming screen without saving data
UNIT WEIGHT	Used to enter a known unit weight using the numeric keypad
+	• Operation Mode – accumulate the total quantity • Program Mode – select an item to be programmed such as item code, factory name, or cycle through set-point modes • Report Mode – select the type of report to print • SPEC Setting – move between SPEC numbers (low to high)
–	• Program Mode –- select programming item such as item code, factory name • Report Mode – select report type • Other Modes – enter the delete function • SPEC Setting – move between SPEC numbers (high to low)
CODE	• Operation Mode – call up stored item code information and switch between item code inventory IN and OUT modes • Program Mode – store the programmed data
.	Enter numeric values containing a decimal point **Note:** *A numeric value must be entered before the decimal point. For example,.250 would be entered as 0.250.*
	Feed label or receipt paper (DC-300 only)
SCALE	Cycle between Scales A through C when using the DC-200/300 as a multi-scale system.

Table 1-5. DC-200/300 Key Functions

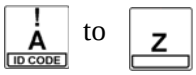
Key	Description
	• Operation Mode – print a label or report • Report Mode – print out a report • Program Mode – enter information about an item into temporary memory
	• Operation Mode – view item code data stored in memory • Program Mode – enter alphabetic data
	Move the cursor. Change the entry to the right. Also used to cycle forward between choices in *SPEC* setting mode.
	Move the cursor. Change the entry to the left. Also used to cycle backward between choices in *SPEC* setting mode.
	Select the top function or character of a desired character key
	Select the bottom function or character of a desired character key, generally to quickly view the values in different registers
	Shift between code type for keyboard entry. Options are: • **P:KEY** - enter the letter or number corresponding to the key pressed • **A:KEY** ASCII code - select by entering the hex code for the character • **T:KEY** Teraoka code - select by entering the numeric value for the character See Section 12.6 on page 159 - Character Code Tables
	Delete data
	Insert data

Table 1-5. DC-200/300 Key Functions

2.0 Installation

This section describes the procedure for the installation and setup of the DC-200/300 counting scale.

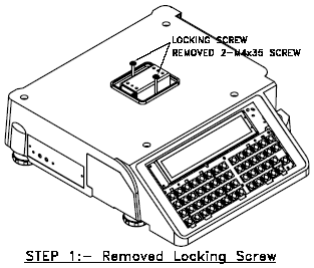
2.1 Unpacking

Caution *Do not turn scale upside down. Always work with scale on its side! Damage to the load cell can occur if the scale is turned upside down.*

Immediately after unpacking, visually inspect the DC-200/300 counting scale to ensure all components are included and undamaged. If any were damaged in shipment, notify Rice Lake Weighing Systems and the shipper immediately.

The DC-200/300 counting scale is packed in custom-fitted foam. After opening the box, remove all the components. Check the insides of the box carefully to make sure you have all of the pieces. The package should include the following:

- DC-200/300 counting scale
- Stainless steel platter
- AC power cord
- DC200/DC300 set-up tools CD-ROM
- Thermal head cleaning kit (DC-300 only)
- Thermal printer take-up reel (DC-300 only)
- DIGI certificate of quality
- Spare keysheet label
- Platter support and support screws (for 1 lb and 2.5 lb units only)



STEP 1:- Removed Locking Screw

Remove the bag protecting the scale and the dessicant bag. and the protective film covering the front panel. The rest of the unpacking/unlocking procedure depends upon the capacity of the scale.

- For units with capacities of 5 lbs or higher, simply remove the foam spacers between the scale case and the platform spider. Then place the stainless steel platter on top of the scale and seat it securely on the rubber stops.
- For 1 lb and 2.5 lb capacity units, first remove the two locking screws, then screw on the platter support.

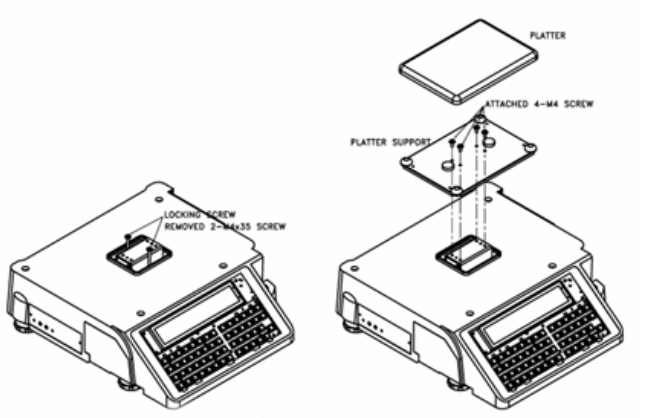


Figure 2-1. Unlocking the Scale and Installing the Platter Support

- Finally, seat the stainless steel platter on the platter support.

After ensuring that all parts are present, store the original box in a safe location for possible future use.

2.2 Repacking

If the DC-200/300 counting scale must be returned for modification, calibration or repair, it must be properly packed with sufficient cushioning materials. Whenever possible, use the original carton when shipping the DC-200/300. Damage caused by improper packaging is not covered by the warranty.

2.3 Setting Up

Place the scale on a solid, level surface away from fans, breezes, and sources of electrical interference.

Level the scale by turning the four adjustable legs located on the bottom of the scale while referencing the bubble level located on the front of the scale (see Figure 2-2).

Note: *To ensure a higher degree of scale stability, turn in all four adjustable legs before leveling. Turn out adjustable legs to level as needed.*

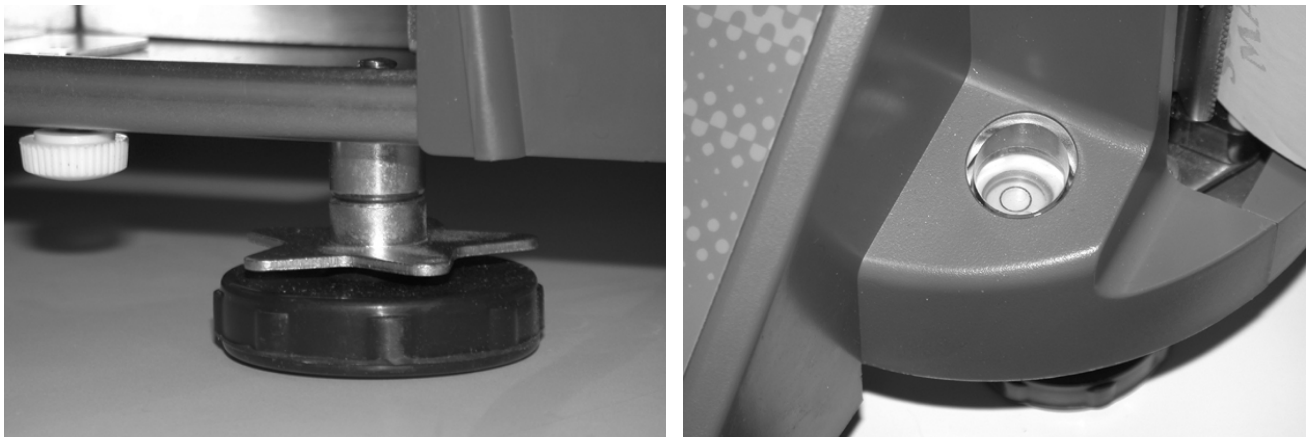


Figure 2-2. Leveling Feet and Bubble

2.4 Powering Up the DC-200/300

After plugging the power cord into the socket on the bottom of the scale (Figure 2-3) turn the power switch on the back of the bottom of the scale to the *ON* position. Generally when starting up the scale, if the power switch is currently *OFF*, turning it to the *ON* position powers up the scale. If the power switch is already in the *ON* position but the display has been powered down by pressing the **ON/OFF** key on the front, the scale can be reactivated by pressing the **ON/OFF** key again.

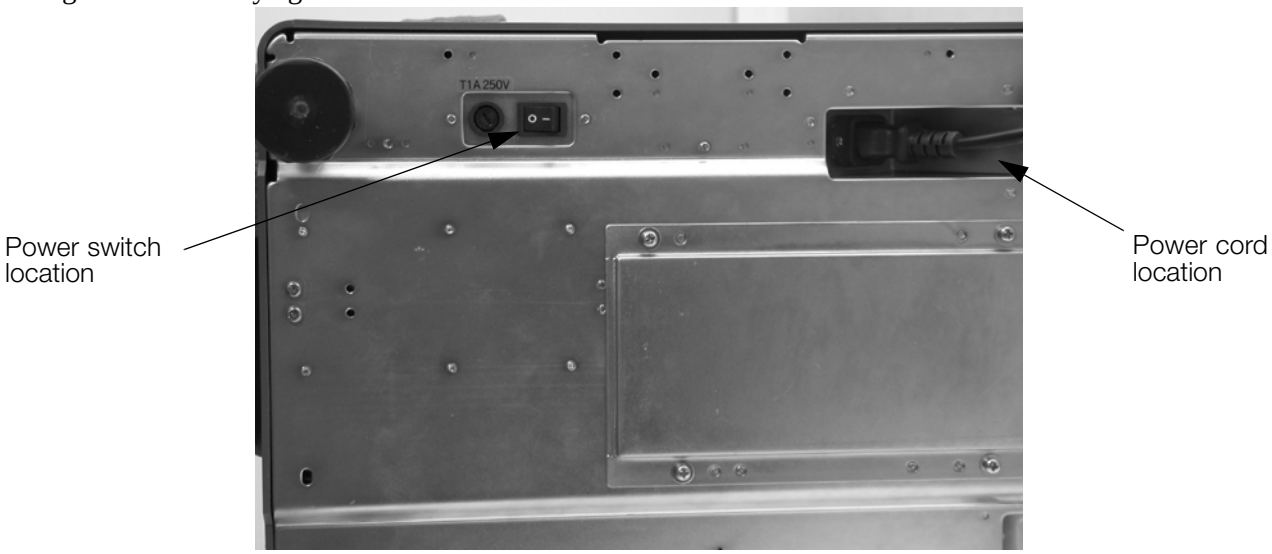


Figure 2-3. Power Switch and Power Cord Location

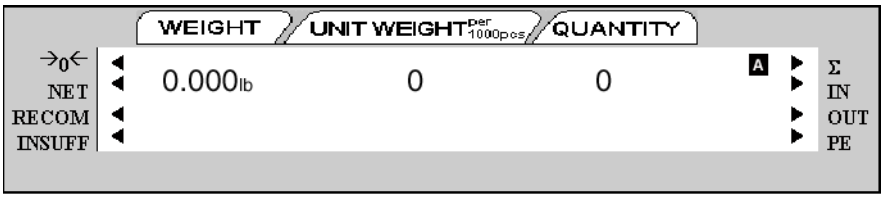
Start-Up Screens

The instructions below assume that you are using the scale as a stand-alone unit, with or without remote platforms. For information on using the DC-200/300 as a network workstation, see Section 11.0.

1. As the scale powers up it will display the current version of the firmware it is using. It also shows that the scale is currently being operated as a stand-alone unit.

   The DC-200 will show *DC-200 Version X.XX*.

2. After a test of the different elements of the display, the scale takes you to the stand-by screen in the Operation Mode. At the stand-by screen the *WEIGHT, UNIT WEIGHT* and *QUANTITY* displays show zeroes and the annuciator for the platform you are using is illuminated (A, B, C or D).



   From this stand-by screen all of the basic weighing, counting and inventory operations can be performed (See Section 6.0 on page 49). Also, if any job sequence instructions have been programmed into the scale, the first operator instruction will be displayed on the second line of the display (See Section 8.0 on page 103).

3. If there is anything on the platform(s) and it exceeds the scale start range, a beep sounds, and the following error message appears.

Note: *The Initial Start Range settings are controlled by SPEC 631. The default setting is 0: +UNLIMITED TO 10% OF FULL SCALE.*

   Remove the weight from the platform and press the **CLEAR** key to exit.

2.5 Setting Time and Date

Once you set the internal clock for the correct day and time it will continue to keep them, even when the scale is off, using the internal battery on the main board. The procedure below can also be used to adjust the time when moving from Standard to Daylight Savings Time or when the scale is moved to a new facility in a different time zone.

Note: *SPEC 05 - DATE ORDER and SPEC 06 - TIME FORMAT allow you to set the format for date and time that you prefer the scale to display. The defaults are Month/Date/Year for date and 12 hour for time. To change these specifications, see Customer Specifications in Chapter 3.*

1. Press the **MODE** key twice until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate.
2. Press the **+** (plus) or **–** (minus) keys to scroll through the programming options until you see the *PROGRAM DATE* screen. Enter the current date using the numeric keypad. For months or days from 1 to 9, enter a leading zero. (Ex. In a MM-DD-YY format, May 8, 2004 would be entered as 050804.) Press the

REPRINT key to store the data in temporary memory and move to the time programming mode.

3. Enter the current time using the numeric keypad. For numbers from 1 to 9, enter a leading zero. (Ex. In a 12 hour format, 3:06 pm would be entered as 0306.) If SPEC 06 - TIME FORMAT is set to a 12 hour format, you use the **<<** and **>>** keys to toggle between AM and PM.
4. Press the **CODE** key to save the data or press the **PIECES** key followed by the **CLEAR** key to exit without saving the data.
5. To return to the Stand-by Screen in the Operation Mode, press the **MODE** key three times.

2.6 Battery Installation (DC-200 only)

This section covers the installation of the DC-200's battery into the battery compartment. Use the following steps to install a battery into the DC-200.

Caution *Do not turn the scale upside down. Always work with the scale on its side! Damage to the load cell can occur if the scale is turned upside down.*

1. Turn the DC-200 on its left side.
2. Unscrew the three screws holding on the side cover to the battery compartment.

Figure 2-4. DC200 Screw Location

3. Remove the side cover enclosing the battery compartment.

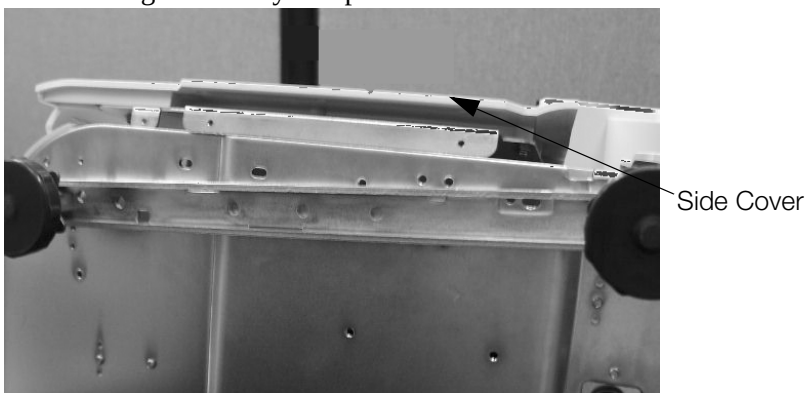


Figure 2-5. Side Cover Location

4. Remove the battery slot screw holding in place the battery holder bracket, then remove the bracket.

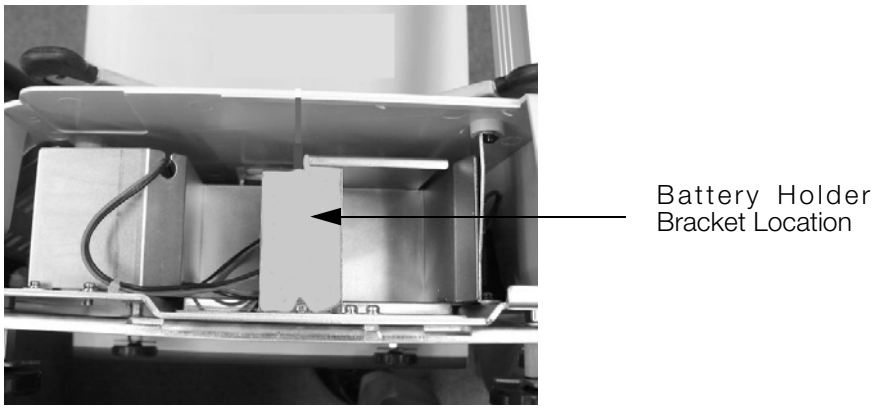


Figure 2-6. Battery Holder Bracket Location

5. Slide the faston connectors on the battery cables onto the faston tabs on the battery, being careful to match the wire color with the colored tag by the faston tabs to insure correct polarity.

Figure 2-7. Faston Tabs

6. Place the battery inside the battery compartment. Then replace the battery holder bracket and secure it with the battery slot screw.

Figure 2-8. Battery Holder Bracket

7. Replace the side cover to the scale case and secure it with the three screws on the bottom of the scale.

3.0 Configuration Settings

This section presents the setup and configuration of the DC-200/300 counting scale to be used specifically by distributors and service technicians. Configuring these specifications allow you to tailor the DC-200/300 to your specific applications.

Setting the specifications allows you to modify the functionality of the DC-200/300. Use the tables in this section to view the options you can modify. For example, if you want the function allowing you to print labels by pressing the **+/-** keys as well as pressing the * **REPRINT** key to work on the DC-200/300, refer to the DC-200/300 specification table and locate *SPEC 34 - PRINT WHEN PRESS +/- KEY*. The default for SPEC 34 is *0*, which means that the *PRINT WHEN PRESS +/- KEY* function is turned off or disabled. To turn it on or enable it, change the SPEC setting to *1*.

3.1 Configuring Specification 141 and 142 Settings from the Scale Keyboard

The following tables list the DC-200/300 specifications and their corresponding default values. The default values are automatically set when the scale's memory is set by the dealer for the country of operation.

SPEC 00 through SPEC 60 (Table 3-1) are customer specifications and use the 141 access code, while SPEC 600 through SPEC 646 (Table 3-2) are weight and measurement specifications, and use the 142 access code. In programming specifications, the * **REPRINT** and **–** (minus) keys allow you to move to the next or previous specification without saving changes to the SPEC code you were just in.

3.1.1 Customer Specification (141 Settings)

1. To configure customer specifications, press and hold the **REZERO** key and enter **141** using the numeric keypad. The first SPEC code, SPEC 0 is displayed, with *SP0: AUTO POWER SAVING* appearing in the first line of the weight display and its current setting (ex. *00>0: Disable*) appearing in the second line.

   If this is the SPEC that you want to modify, press **>>** or **<<** keys to scroll through the possible settings. When the setting you want to store is displayed, press the **+** (plus) key to enter the change into temporary memory and move to the next SPEC code.
2. If you want to modify a SPEC other than SPEC 00 and you know the number of that SPEC code, enter the number of the SPEC code on the numeric keypad and press the * **REPRINT** key. Otherwise, you can use the **+** (plus) and **–** (minus) keys to scroll through the specifications until you find the one you want. Then make your changes per the instructions in Step 1.
3. To change another SPEC code before exiting, repeat Steps 1 and 2.
4. To save all the changed SPEC settings currently in temporary memory and exit to the Operation Mode, press the **CODE** key. You will hear a long beep to confirm that the scale is saving the change. The saving of the configuration file takes about 10 seconds, after which the scale will return to the Stand-By mode. To exit to the Operation Mode without saving the changes, press the **TARE** key.

Caution *If you power off the scale while the saving process in going on, you can clear the entire memory of the scale! Wait until the scale has returned to the Stand-by screen before performing any other functions.*

5. Power down scale using the power switch on the back of the bottom of the scale, not the **ON/OFF** key on the keyboard.
6. Power scale on to re-initialize the new specification settings.

SPEC	Description
00	Auto Power Saving When No Weight Change & No Key Press 0: Disable (DEFAULT) 1: 1 minute 2: 2 minutes 3: 3 minutes 4: 4 minutes 5: 5 minutes 6: 6 minutes 7: 7 minutes 8: 8 minutes 9: 9 minutes 10: 10 minutes 11: 11 minutes 12: 12 minutes 13: 13 minutes 14: 14 minutes 15: 15 minutes
01	Power Saving Type When set to 0, the backlight turns off when the scale goes into power-saving mode. When set to 1, the scale turns off entirely 0: Backlight Off (DEFAULT) 1: Power Off
02	Negative Counting 0: No 1: Yes (DEFAULT)
03	Extent of Insufficient Samples Sets the percentage of the full scale capacity that the initial counting sample has to exceed, otherwise the *INSUFF* lamp lights. 0: 0.1% (DEFAULT) 1: 0.2% 2: 0.0%
04	Set New Item Code During Registration (Operation) Mode This allows you to add item codes while weighing in the Operation Mode without having to switch to the programming mode. These item codes can then be saved to the scale's item code memory (by choosing 0: Allow - Save); or ou can enter Item Codes, Part Names, and Lot Numbers that will print on labels but not be saved to the item code memory (1: Allow - Not Save); or not allow items code and item information to be set unless you are in the programming mode (2: Not Allow). 0: Allow (Save) (DEFAULT) 1: Allow (Not Save) 2: Not Allow
05	Date Order 0: Month/Day/Year (DEFAULT) 1: Day/Month/Year 2: Year/Month/Day
06	Time Format 0: 24 hour (DEFAULT) 1: 12 HOUR (am/pm)
07	Unit Weight Auto Recomputing 0: No (DEFAULT) 1: Yes
08	Sampling Times for Unit Weight Calculation Higher number samples improve accuracy in environments of higher vibration or breeze but also increase the time required to compute the unit weight. 0: 15 times (DEFAULT) 1: 20 times

Table 3-1. DC-200/300 (141) Settings

SPEC	Description
09	Display Accuracy Unit Weight Calculation During Recomputing 0: No (DEFAULT) 1: Yes
10	Set Point Buzzer 0: Buzzer on (DEFAULT) 1: Buzzer off
11	Clear All Input Key in One Touch 0: Yes 1: No (DEFAULT)
12	Keep Lot Number in Registration (Operation) Mode 0: Allow (DEFAULT) 1: Inhibit
13	Job Sequence 0: Disable (DEFAULT) 1: Enable
14	Auto Exit From Add Mode 0: No 1: Yes (DEFAULT)
15	SIO Select Job Defines what the primary or standard input/output port on the scale is connecting to. 0: No operation (DEFAULT) 1: Not Used 2: PC 3: Printer 4: Bar Code Scanner
16	RS-232C Baud Rate (SIO - Standard Input/Output Port) 0: 1200 baud 1: 2400 baud 2: 4800 baud 3: 9600 baud (DEFAULT) 4: 19200 baud 5: 38400 baud
17	RS-232C Data Length (SIO - Standard Input/Output Port) 0: 7 bits 1: 8 bits (DEFAULT)
18	RS-232C Parity Bit (SIO - Standard Input/Output Port) 0: None (DEFAULT) 1: Odd 2: Even
19	RS-232C Stop Bit (SIO - Standard Input/Output Port) 0: 1 bit (DEFAULT) 1: 2 bits
20	RS-232 Option Card 0: Not connected (DEFAULT) 1: Not Used 2: Not Used 3: Printer/PC 4: PC/Printer 5: Not Used 6: Not Used

Table 3-1. DC-200/300 (141) Settings

SPEC	Description
21	RS-232 Baud Rate for 8 Pin DIN 1 Connector 0: 4800 1: 9600 (DEFAULT) 2: 19200 3: 38400
22	RS-232 Data Length for 8 Pin DIN 1 Connector 0: 7 bits 1: 8 bits (DEFAULT)
23	RS-232 Stop Bit for 8 Pin DIN 1 Connector 0: 1 bit (DEFAULT) 1: 2 bits
24	RS-232 Parity Bit for 8 Pin DIN 1 Connector 0: None (DEFAULT) 1: Odd 2: Even
25	RS-232 Baud Rate for 8 Pin DIN 2 Connector 0: 4800 1: 9600 (DEFAULT) 2: 19200 3: 38400
26	RS-232 Data Length for 8 Pin DIN 2 Connector 0: 7 bits 1: 8 bits (DEFAULT)
27	RS-232 Stop Bit for 8 Pin DIN 2 Connector 0: 1 bit (DEFAULT) 1: 2 bits
28	RS-232 Parity Bit for 8 Pin DIN 2 Connector 0: None (DEFAULT) 1: Odd 2: Even
29	Not Used
30	Not Used
31	PC/PRN Output Data Method 0: No operation 1: Counting 2: By +/-/Print Key (PC/PRN) (DEFAULT) 3: For both classes 1 & 2
32	Select External Printer Type (LP2824) 0: Eltron LP2622/LP2722 or TVP1000 (DEFAULT) 1: SE250 or (BCP300) 2: DP122 (Japan) 3: EPSON Output
33	External Eltron/TVP Printer Download Label Format 0: Enable (DEFAULT) 1: Disable
34	Print When Press +/- Key 0: Disable (DEFAULT) 1: Enable
35	PC Data With Header 0: Yes (DEFAULT) 1: No

Table 3-1. DC-200/300 (141) Settings

SPEC	Description
36	PC Data Header Type 0: Code 9 - numeric headers (DEFAULT) 1: Title - alphabetic headers
37	IBM Keyboard Port 0: IBM Keyboard (DEFAULT) 1: Scanner
38	Barcode Scanner (BCS) With Header 0: Yes (DEFAULT) 1: No
39	Track Nprint (TNP) Time Out 0: 2 seconds (DEFAULT) 1: 8 seconds 2: 32 seconds
40	Selection of Network Interface 0: No network (RS-232) (DEFAULT) 1: Twisted Cable (Ethernet)
41	Port Number (IP Address) The port number can be set anywhere in a range from 1 to 255 (DEFAULT = 001 for DC-300) (DEFAULT = 002 for DC-200)
42	Set Scale Number The scale number can be set anywhere in a range from 0 to 999999 (DEFAULT = 00001)
43	Select Receipt or Label Paper Printing (DC-300 only) 0: Print paper receipt 1: Print label paper (DEFAULT)
44	Printing Speed For Receipt (DC-300 only) 0: Slow 1: Normal (DEFAULT) 2: High
45	Printing Speed for Label (DC-300 only) 0: Slow 1: Normal (DEFAULT) 2: High
46	Label Printing Density (DC-300 only) 0: Low 1: Medium 2: Medium High (DEFAULT) 3: High
47	Label Type (DC-300 only) 0: Gap (DEFAULT) 1: No Gap
48	Peel Sensor Function (DC-300 only) The peel sensor determines whether labels are set to be printed with the backing left on (0: disable) or with the backing peeled part way so that an individual label can be removed easily from the backing for immediate use (1: enable). 0: Disable 1: Enable (DEFAULT)
49	Number of Reprint Labels (DC-300 only) 0: No Reprint 1:1 Label (DEFAULT) 2:2 Labels

Table 3-1. DC-200/300 (141) Settings

SPEC	Description
50	Selection of Label and Receipt Printing Operation 0: All operation (in/out/non-add) (DEFAULT) 1: Out (shipping operations) 2: In (receiving operations) 3: In and out 4: No printing
51	Human Readable Barcode Printing Format 0: No print (DEFAULT) 1: Print
52	Item Data Printing Format (DC-300 only) Sets the justification for printing the data associated with item codes in memory such as ID codes, part name, part number, and lot number 0: Centering 1: Start printing from the left (DEFAULT)
53	Date Title Print (DC-300 only) 0: No 1: Yes (DEFAULT)
54	Weight Data and Quantity Title Print (DC-300 only) 0: No print 1: Print (DEFAULT)
55	Printing of Factory Name on Label (DC-300 only) 0: No print 1: Print (DEFAULT)
56	Default Printing Label Factory Number (DC-300 only) Can choose a factory number in a range from 0 to 32. (DEFAULT = 01)
57	Printing of Factory Name Format (DC-300 only) 0: No centering 1: Centering (DEFAULT)
58	Selection of Label Logo Printing Status (DC-300 only) 0: No print (DEFAULT) 1: Logo 1 2: Logo 2 3: Logo 3 4: Logo 4
59	Selection of Barcode Type 0: Code 128A 1: Code 128B 2: EAN 128A 3: EAN 128B 4: CODE 39 (DEFAULT)
60	Auto Print Function 0: Between set point 1 and set point 2 1: Disable (DEFAULT)
61	Ethernet Function 0: No operation (DEFAULT) 1: Track N Print 2: Data Transfer Mode
62	RS232 - XON/XOFF 0: Disable (DEFAULT) 1: Enable

Table 3-1. DC-200/300 (141) Settings

SPEC	Description
63	Sample Quantity Determines the number of pieces the scale assumes are on the platter when you press the **PIECES** key to calculate the Unit Weight. 0: 10 pieces (DEFAULT) 1: 25 pieces 2: 50 pieces 3: 100 pieces
64	Scale A <–> B Sets whether the unit weight determined by sampling on Scale A is automatically transferred to Scale B or not. 0: Manual (DEFAULT) 1: Auto
65	Unit of Pcs Weight Sets whether the unit weights are displayed per 1000 pieces or per 1 piece. For a further discussion of the benefits of each option, please see Section 5.5. 0: 1000 pieces (DEFAULT) 1: 1 piece
66	Not Used
67	IMS Determines whether or not the scale automatically queries the DIGI Inventory Management Software (IMS) for all of the parameters associated with an Item Code when the **CODE** key is pressed. For more information on this option, please see Section 5.10.1. 0: Disable (DEFAULT) 1: Enable
68	EPSON II Changes the Epson label format from the default (all item information fields) to an abbreviated format with only selected fields. 0: Disable (DEFAULT) 1: Enable
69	4 Lot No. If disabled, allows a single lot number to be entered during weighing operations. If enabled, allows up to 4 lot numbers to be entered. These lot numbers are not written to the item database. 0: Disable (DEFAULT) 1: Enable
70	Upload Lot and Part Number If disabled, lot numbers and part numbers entered during weighing operations are not uploaded to the item database. If enabled, lot numbers and part numbers entered during weighing operations overwrite the information previously stored with the item code in the scale memory. 0: Disable (DEFAULT) 1: Enable
71	Text 11-16 TTL Allows you to use text fields 11-16 on total labels rather than just item labels. 0: Disable (DEFAULT) 1: Enable
72	Comma in Quantity Enabling this option prints a comma after the first three places in a Quantity field on a user programmed free label format. This allows a large quantity number to be read more easily at a glance. Does not fit on the standard label format. 0: Disable (DEFAULT) 1: Enable

Table 3-1. DC-200/300 (141) Settings

SPEC	Description
73	Print Barcode This option allows you to print barcodes on labels with all headers printed, with no headers printed, or with all headers except the header for the Quantity barcode. 0: With Header (DEFAULT) 1: All Without Header 2: Quantity Without Header
74	Overwrite Unit Weight Allows you to protect the Unit Weight so that it cannot be overwritten by the operator. 0: No (DEFAULT) 1: Yes (If Unit Weight = 0)

Table 3-1. DC-200/300 (141) Settings

3.1.2 Weight and Measurement Specification (142 Settings)

1. Press and hold the **REZERO** key and enter **142** using the numeric keypad. *SP600* appears in weight display and its current setting (ex. *2>2: LB*) appearing in the second line. If this is the SPEC that you want to modify, press the **>>** or **<<** keys to scroll through the possible settings. When the setting you want to store is displayed, press the **+** (plus) key to enter the change into temporary memory and move to the next SPEC code.
2. If you want to modify a SPEC other than SPEC 600 and you know the number of that SPEC code, enter the number of the SPEC code on the numeric keypad and press the ***REPRINT** key. Otherwise, you can use the **+** (plus) and **–** (minus) keys to scroll through the specifications until you find the one you want. Then make your changes per the instructions in Step 1.
3. To change another SPEC code before exiting, repeat Steps 1 and 2.
4. To save all the changed SPEC settings currently in temporary memory and exit to the Operation Mode, press the **CODE** key. To exit to the Operation Mode without saving the changes, press the **TARE** key.
5. Power down scale using the power switch on the back of the bottom of the scale, not the **ON/OFF** key on the keyboard.
6. Power scale on to re-initialize the new specification settings.

Spec	Description
600	Scale Unit Specification 0: Gram 1: Kg 2: Lb (DEFAULT)
601	Display Resolution 0: 1/10000 (DEFAULT) 1: 1/5000 2: 1/2500)
602	Internal Count 0: 500,000 1: 1,000,000 (DEFAULT)
603	Minimum Display (Increment) for Scale A 0: 2 (DEFAULT) 1: 1 2: 5 3: 10

Table 3-2. DC-200/300 (142) Settings

Spec	Description
604	Weight Decimal Point Position for Scale A 0: 0 1: 0.0 2: 0.00 3: 0.000 (DEFAULT) 4: 0.0000
605	Load Cell Sensitivity Selection in mV/V for Scale A 0: 4.00 mV/V 1: 3.76 mV/V 2: 3.52 mV/V 3: 3.28 mV/V 4: 3.04 mV/V 5: 2.80 mV/V 6: 2.56 mV/V 7: 2.32 mV/V 8: 2.08 mV/V 9: 1.84 mV/V 10: 1.60 mV/V 11: 1.36 mV/V 12: 1.12 mV/V (DEFAULT) 13: 0.88 mV/V 14: 0.64 mV/V 15: 0.40 mV/V
606	Load Cell Type for Scale A 0: Standard / Normal load cell (DEFAULT) 1: Abnormal load cell with large offset
607	A/D Board Type for Scale A 0: Normal (DEFAULT) 1: Prevent from small vibration / fast change in display 2: Prevent from medium vibration 3: Prevent from large vibration / slow change in display
608	External Scale B Connection 0: Disable (DEFAULT) 1: Enable
609	Minimum Display (Increment) for Scale B 0: 2 (DEFAULT) 1: 1 2: 5 3: 10
610	Weight Decimal Point Position for Scale B 0: 0 1: 0.0 2: 0.00 3: 0.000 4: 0.0000 (DEFAULT)

Table 3-2. DC-200/300 (142) Settings

Spec	Description
611	Load Cell Sensitivity Selection in mV/V for Scale B 0: 4.00 mV/V 1: 3.76 mV/V 2: 3.52 mV/V 3: 3.28 mV/V 4: 3.04 mV/V 5: 2.80 mV/V 6: 2.56 mV/V 7: 2.32 mV/V 8: 2.08 mV/V 9: 1.84 mV/V 10: 1.60 mV/V 11: 1.36 mV/V 12: 1.12 mV/V (DEFAULT) 13: 0.88 mV/V 14: 0.64 mV/V 15: 0.40 mV/V
612	Load Cell Type for Scale B 0: Standard / Normal load cell (DEFAULT) 1: Abnormal load cell with large offset
613	A/D Board Type for Scale B 0: Normal (DEFAULT) 1: Prevent from small vibration / fast change in display 2: Prevent from medium vibration 3: Prevent from large vibration / slow change in display
614	External Scale C Connection 0: Disable (DEFAULT) 1: Enable
615	Minimum Display Increment for Scale C 0: 2 1: 1 (DEFAULT) 2: 5 3: 10
616	Weight Decimal Point Position for Scale C 0: 0 (DEFAULT) 1: 0.0 2: 0.00 3: 0.000 4: 0.0000

Table 3-2. DC-200/300 (142) Settings

Spec	Description
617	Load Cell Sensitivity Selection in mV/V for Scale C 0: 4.00 mV/V 1: 3.76 mV/V 2: 3.52 mV/V 3: 3.28 mV/V 4: 3.04 mV/V 5: 2.80 mV/V 6: 2.56 mV/V 7: 2.32 mV/V 8: 2.08 mV/V 9: 1.84 mV/V (DEFAULT) 10: 1.60 mV/V 11: 1.36 mV/V 12: 1.12 mV/V 13: 0.88 mV/V 14: 0.64 mV/V 15: 0.40 mV/V
618	Load Cell Type for Scale C 0: Standard / Normal load cell (DEFAULT) 1: Abnormal load cell with large offset
619	A/D Board Type for Scale C 0: Normal (DEFAULT) 1: Prevent from small vibration / fast change in display 2: Prevent from medium vibration 3: Prevent from large vibration / slow change in display
620	Tare Range Settings 0: 100% full scale (DEFAULT) 1: <50% full scale 2: <5% full scale
621	Digital Tare Setting 0: Disable 1: Enable (DEFAULT)
622	Tare Accumulation 0: No (DEFAULT) 1: Yes
623	Digital Tare When Loaded 0: Allow (DEFAULT) 1: Inhibit
624	Tare Subtraction (for Load Tare Only) 0: Yes (DEFAULT) 1: No
625	Tare Addition (for Load Tare Only) 0: Yes 1: No (DEFAULT)
626	Tare Value Exchange (for Load Tare) 0: Yes (DEFAULT) 1: No
627	Zero Tracking When Tare 0: Yes (DEFAULT) 1: No
628	Tare When Scale Change 0: Old Tare (DEFAULT) 1: New Tare

Table 3-2. DC-200/300 (142) Settings

Spec	Description
629	Weight Reset When Tare 0: Yes (DEFAULT) 1: No
630	Auto Clear Tare When Rezero 0: No (DEFAULT) 1: Yes
631	Initial Start Range Settings 0: +Unlimited to 10% full scale (DEFAULT) 1: +/- 2% full scale 2: +/- 10% full scale
632	Zero Range Settings 0: +Unlimited to 10% full scale (DEFAULT) 1: +/- 2% full scale 2: +/- 10% full scale
633	Zero Lamp Lighting Method 0: Gross weight (DEFAULT) 1: Net weight
634	Rezero When Changing Scale 0: No rezero (DEFAULT) 1: Rezero
635	Stability Check When Changing Scale 0: Stability check (DEFAULT) 1: No stability check
636	Internal Count Resolution (IR) Protected by Span Switch 0: No (DEFAULT) 1: Span switch protect
637	Calibration/Default SPEC/SPEC 142 Mode Protected by Span Switch 0: Span switch protection 1: No protection (DELETE)
638	Display at Minus Weight 0: Minus display (DEFAULT) 1: Masked display
639	Masked Display at Minus Weight 0: Gross weight (DEFAULT) 1: Net weight
640	Overweight Masked 0: At +1D (DEFAULT) 1: At + 9D
641	Selection of Scale Starting Method 0: Auto start (DEFAULT) 1: Manual start
642	Weight Unit Convert 0: Yes (DEFAULT) 1: No
643	Gross Mode Display 0: Yes (DEFAULT) 1: No

Table 3-2. DC-200/300 (142) Settings

Spec	Description
644	Selection of Decimal Point Type Sets whether the decimal point is displayed as a period (U.S. usage) or a comma (European, Latin American, Asian usage) 0: Period display (DEFAULT) 1: Comma display
645	Selection of Scale Type 0: DC-300 scale 1: DC-200 scale
646	Automatic Unit Weight Clear Conditions 0: Disable (DEFAULT) 1: Over net 5D & gross 21D & weight stable 2: >=net 1D & weight stable 3: >=net 1D & quantity > 0 & weight stable

Table 3-2. DC-200/300 (142) Settings

3.2 Configuring Spec 141 and 142 Settings Using the Spec Upload Utility

The DC-300 Utility Program includes a module called “Spec Upload”. This handy program allows you to more easily do four useful things:

- change one or any number of spec settings from your computer screen and then upload them to a DC-200/300 rather than change them from the scale’s keyboard.
- save the spec setting currently programmed in the DC-200/300 to a named file on your computer from which they can be restored to the same DC-200/300 later or uploaded to other DC-200/300s so that their spec settings match.
- save spec settings optimized for a particular task, department or facility to a named file on the computer. This complete set of spec settings can then be uploaded to a DC-200/300 whenever the scale’s use or location changes, rather than have to go through and manually change each spec. It can also be used to save a backup of your spec settings if you should need to send your scale to be serviced.
- return all the scale’s spec settings to the default settings by uploading the defaults from the computer to the scale.

Note: *For information on how to install the DC-300 Utility Program on your computer, See Section 6.2.2 on page 54 If you have not already set up your computer and the scale to be able to communicate to each other using the DC-200/300’s Ethernet connection, please see Section 11.0. If you are unsure of how to work with TCP/IP connections or have difficulties, see your Network Administrator for help.*

3.2.1 Change Spec Settings Using the Spec Upload Utility

1. With the scale turned on and at the Stand-by screen, press **REZERO + SHIFT UP.** The scale display will indicate that it is changing to the data transfer mode.

2. The scale display will next indicate that it is ready for the data transfer mode after the scale is restarted.

Turn the scale off and then on again, using the on/off switch located on the bottom of the scale at the back.

3. After you restart the scale and it goes through its startup sequence, the scale will show that the data transfer mode is ready.

4. On your computer, open the Spec Upload program.

Note: *If you have not yet installed the DC-300 Utility Program, see Section 6.2.2 on page 54.*

At the opening screen of the Spec Upload program, you have the option to Load the Default Setting file; load from a named, saved file on your computer; or read the spec settings from the DC-200/300 scale connected to your computer.

Select the radio button for *Read From Scale*. Also make sure that the Scale No. radio button for 192.168.0.1 (the IP address of the DC-300) has been selected if you are using the DC-300 or 192.168.0.2 if you are using the DC-200.

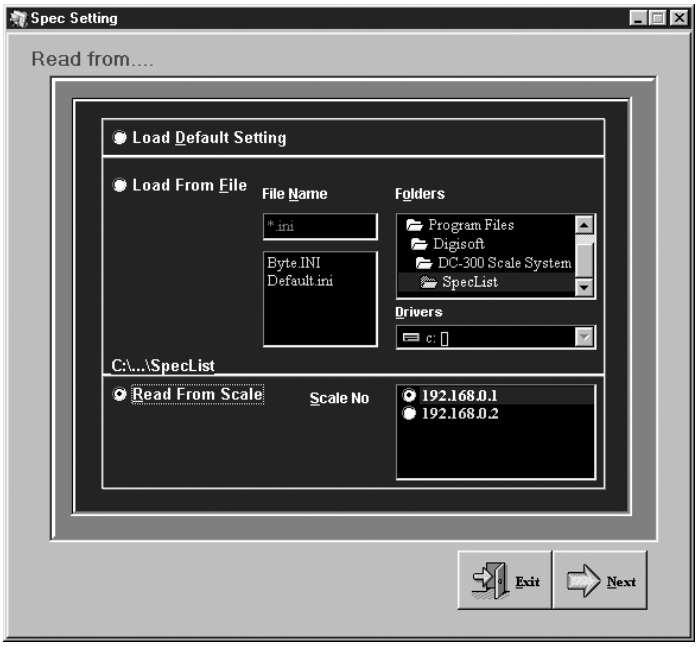


Figure 3-1. Read From Scale Screen

5. Click on the **Next** button at the bottom of the Spec Setting dialog box. The program will confirm *Spec reading in progress, please wait...*, showing that it is uploading the current spec settings from the scale. The Spec Upload program will next display the Spec Setting screen, showing the values of the first four SPECs programmed in the scale.

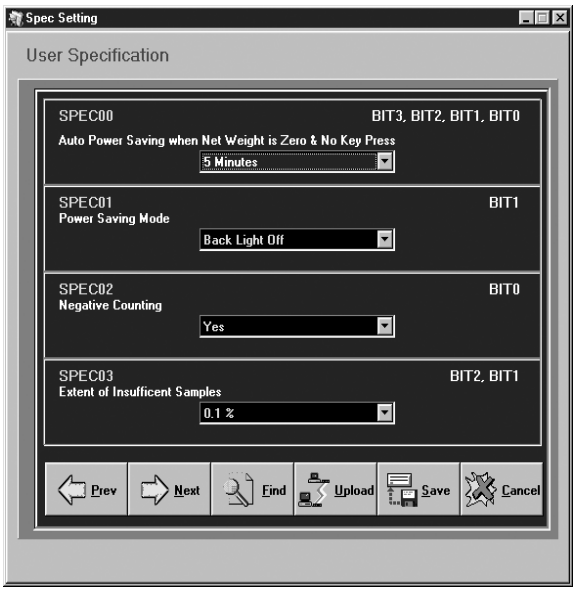


Figure 3-2. User Specification Screen

6. To change the setting of one or more of the first four specs, use the pull down list box for that spec to choose among the available settings for that specification. To move to the next four specifications, click on the **Next** button at the bottom of the dialog box.
7. Once you have made all the needed changes to the specifications, you can upload the changed specs to the scale and also save the new configuration to a named file on your computer for future updating of this scale or matching the specifications on another DC-200/300 (Section 3.2.2 on page 29).

   To save the new configuration settings, click on the **Save** button at the bottom of the dialog box. You will be prompted to give this configuration a file name. The next time you open the DC-300 Spec Upload program, this file will show as one of the ones available to upload to any DC-200/300. After assigning a file name, click on the **Save** button to save the file. You will be returned to the main Spec Upload Utility screen.
8. To upload the changed spec settings to the DC-200/300 currently connected to your computer, click on the **Upload** button. The utility will ask you whether you want to update one specific spec or all the specs.

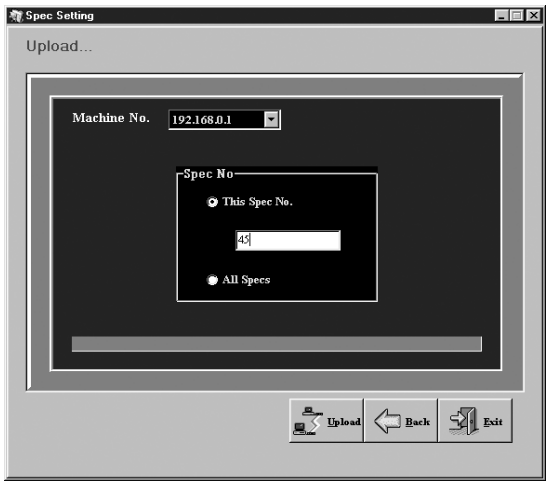


Figure 3-3. Upload Screen

To update only one spec, type its number into the box. To update all the specifications, select the radio button for *All Specifications*. Click on the **Upload** button.

9. The program will confirm with the message *Successfully Sent* while the scale display shows the following.

Warning *If you power off the scale while the saving process in going on, you can clear the entire memory of the scale!*

Once the scale has completed the upload of the change(s), it will display the following:

The scale should be powered down and then powered back up to initialize the new changes. When the scale is powered back up, it will still be in the *DATA TRANSFER MODE - READY* state. To exit the Data Transfer Mode, continue with the instructions below.

10. To exit the Data Transfer Mode on your DC-200/300 scale and return it to normal weighing mode, press **REZERO + SHIFT DOWN**. The scale will briefly display a message saying that it is exiting the Data Transfer mode.

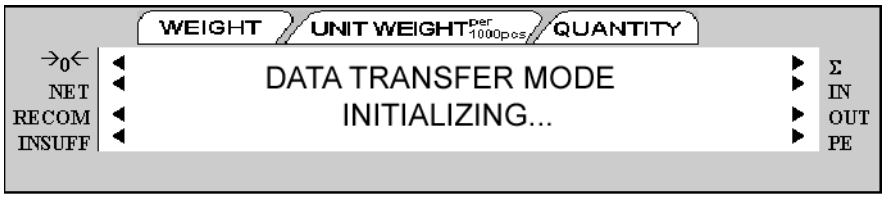
11. Next you will be prompted to restart the scale.

Once you have restarted the scale, you will be returned to normal weighing operations.

3.2.2 Uploading Saved Spec Configurations to a DC-200/300

To download the spec settings from a DC-200/300 to the computer, see Section 3.2.1. If you already have a saved configuration file of spec settings, use the instructions below to upload the settings to a DC-200/300. This could be to change the settings of a DC-200/300 to fit a particular task, department or facility or it could be to take the spec settings configuration from one DC-200/300 and upload it to other DC-200/300's so that their settings match.

1. With the scale turned on and at the Stand-by screen, press **REZERO + SHIFT UP**. The scale display will indicate that it is changing to the data transfer mode.



2. The scale display will next indicate that it is ready for the data transfer mode after the scale is restarted.

   Turn the scale off and then on again, using the on/off switch located on the bottom of the scale at the back.

3. After you restart the scale and it goes through its startup sequence, the scale will show that the data transfer mode is ready.

4. On your computer, open the Spec Upload program.

Note: *If you have not yet installed the DC-300 Utility Programs, see "Installing the DC-300 Utility Program".*

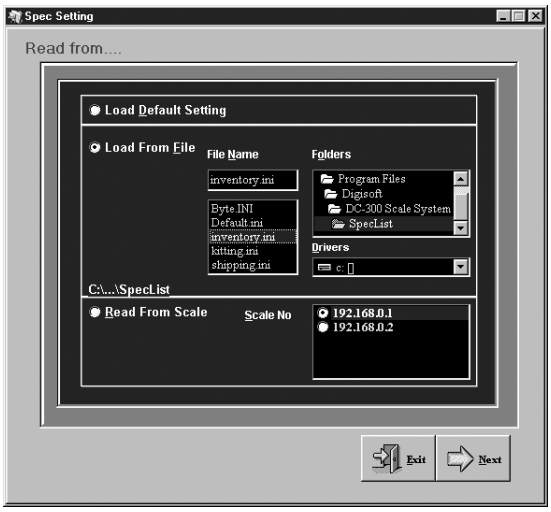


Figure 3-4. Load From File Screen

At the opening screen of the Spec Upload program, you have the option to Load the Default Setting file; load from a named, saved file on your computer; or read the spec settings from the DC-200/300 scale connected to your computer.

- to load the default specification settings to the scale, click the radio button next to *Load Default Setting*. When you installed the DC-300 Utility Program a file named *Default.ini* was copied into the Digisoft folder on your computer. To see what the default settings are for the scale specifications, see Section 3.1.
- to load a specification file you have previously saved to your computer, select the radio button for *Load From File*. If the named file you want to upload to the scale appears in the *File Name* box, click on it to select it. If the file you want does not appear in the *File Name* box, use the *Drives* and *Folders* explorer windows to find the file you are looking for.

  Once you have selected the spec configuration file to be uploaded and it appears under *File Name*, click on the *Next* button at the bottom of the screen to continue.

5. In the next screen you have the option to change any of the spec settings saved in this file before uploading.

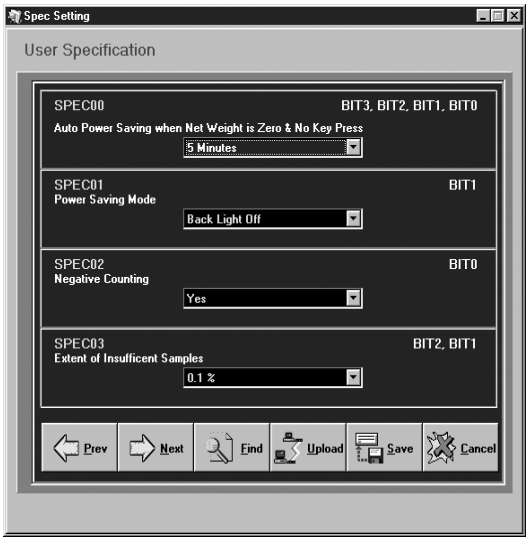


Figure 3-5. User Specification Screen

To upload to the scale without making any changes, click on the **Upload** button. To change the setting of one or more of the first four specs, use the pull down list box for that spec to choose among the available

settings for that specification. To move to the next four specifications, press the **Next** button at the bottom of the dialog box.

6. Once you have made all the needed changes to the specifications, you can upload the changed specs to the scale and also save the new configuration to a named file on your computer for future updating of this scale or matching the specifications on another DC-200/300 (Section 3.2.2).

   To save the new configuration settings, click on the **Save** button at the bottom of the dialog box. You will be prompted to give this configuration a file name. The next time you open the DC-300 Spec Upload program, this file will show as one of the ones available to upload to any DC-200/300. After assigning a file name, click on the **Save** button to save the file. You will be returned to the main Spec Upload Utility screen.

7. To upload the changed spec settings to the DC-200/300 currently connected to your computer, click on the **Upload** button. The utility will ask you whether you want to update one specific spec or all the specs. To update only one spec, type its number into the box. To update all the specifications, select the radio button for all specifications. Click the **Upload** button.

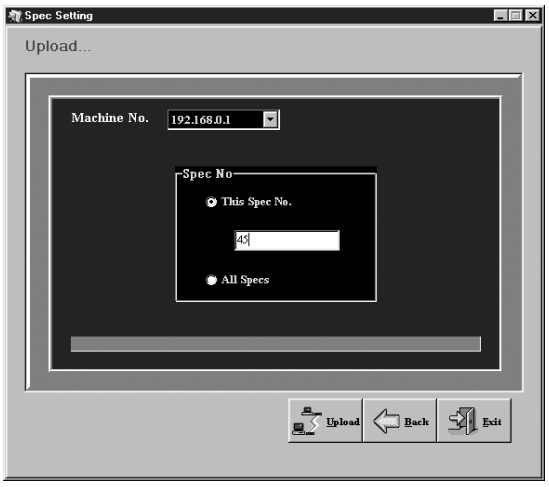


Figure 3-6. Upload Spec Settings

8. The program will confirm with the message *Successfully Sent* while the scale display shows the following.

Warning *If you power off the scale while the saving process in going on, you can clear the entire memory of the scale!*

9. Once the scale has completed the upload of the change(s), it will display the following:

The scale should be powered down and then powered back up to initialize the new changes. When the scale is powered back up, it will still be in the *DATA TRANSFER MODE - READY* state. To exit the Data Transfer Mode, continue with the instructions below.

10. To exit the Data Transfer Mode on your DC-200/300 scale and return it to normal weighing mode, press **REZERO + SHIFT DOWN.** The scale will briefly display a message saying that it is exiting the Data Transfer mode.

11. Next you will be prompted to restart the scale.

Once you have restarted the scale, you will be returned to normal weighing operations.

4.0 Calibration

The DC-200/300 counting scale is a high-precision instrument. Although the scale needs very little maintenance, you may want to check the calibration after every month or so of normal usage. To do this you will need to have a test weight of approximately the total capacity of the scale (i.e. a 10 lb weight if you have a 10 lb capacity scale). After the scale is initially installed, put the weight on the platform and record the weight displayed. Then every month or so put the same weight on the scale and verify that it still reads the same.

Many facilities have a technician come in and check their units with certified test weights four times a year. If you are ISO certified, you will want to check to see if your certification specifies more stringent requirements to stay in compliance. Your DIGI scale dealer has the calibrated test weights, expertise and experience to perform this task for you as well as to check other operating parameters of your scale and help you effectively integrate scales into your operations. If you do not know who your local DIGI dealer is, call us at 1-715-736-0002 and we will help you find someone who can provide you with on-site support.

Follow the instructions below to calibrate your DC-200/300 scale to ensure its continued accuracy.

1. Make sure the scale is turned off. Then press the span switch to reset it. (See Figure 4-1 for location of Span switch).

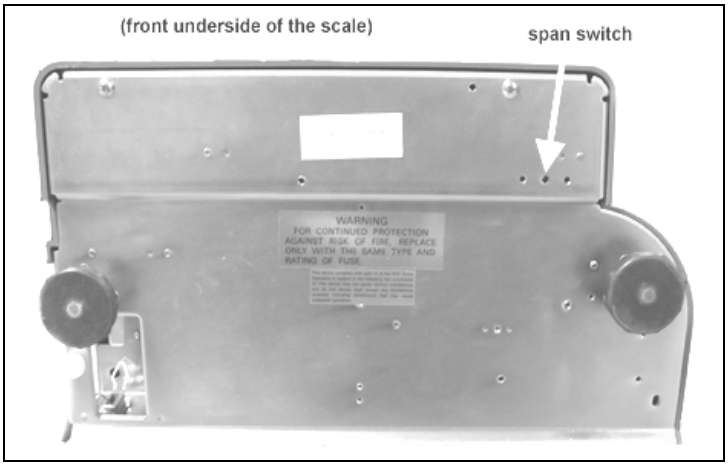
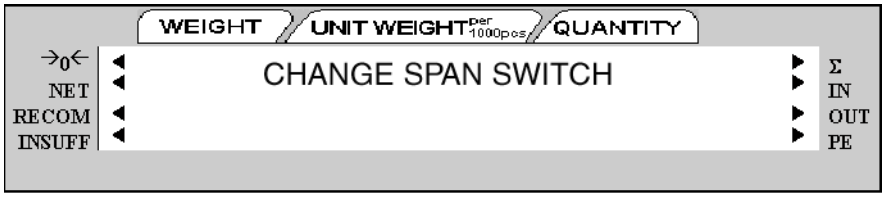

(front underside of the scale)
span switch
WARNING
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE AND RATING OF FUSE.

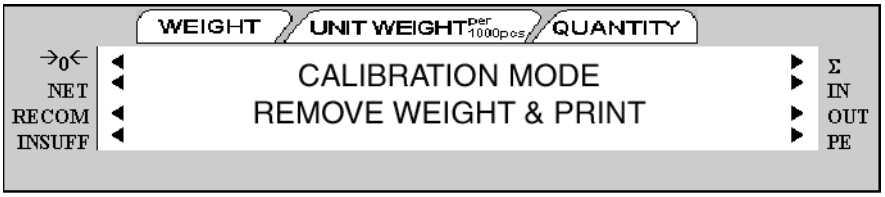
Figure 4-1. Location of Span Switch

2. Turn the scale back on. The scale displays the message *CHANGE SPAN SWITCH*.

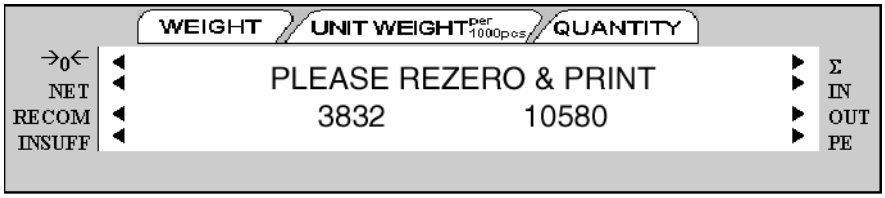


3. While pressing the **REZERO** key, enter **8715** from the numeric keypad to enter the calibration mode.

4. The scale display confirms that you are in the Calibration Mode.

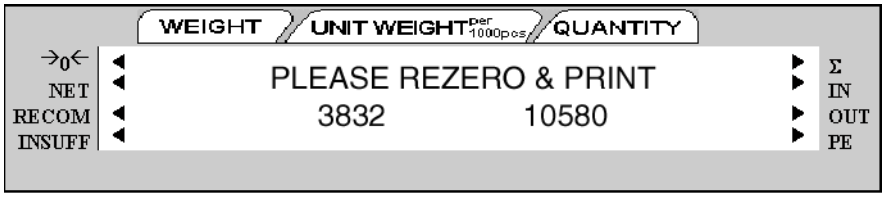


5. Next, press the * **REPRINT** key to enter the zero setting mode.

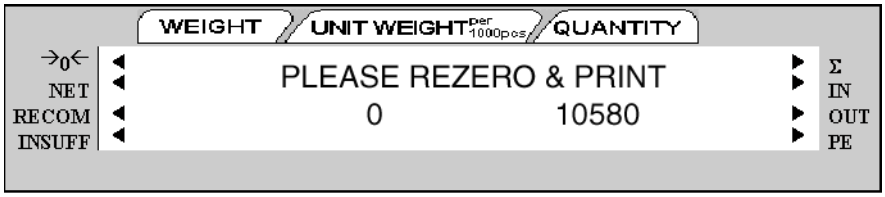


6. Choose which scale platform you are calibrating. The scale defaults to platform A. To choose another scale platform, press the **SCALE** key until the platform you want to calibrate is displayed.
7. Make sure that nothing is on the scale platform and press the **CODE** key to have the scale automatically search for the zero point.

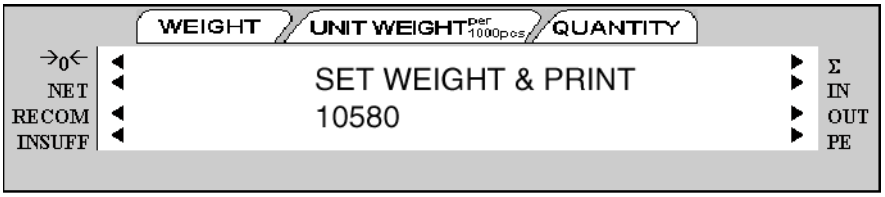
8. The scale displays the zero point in the quantity window. It should be a value between 9000 and 11000. If the scale does not catch that range, you will need to call your local DIGI dealer or call us at 1-715-736-0002 for service assistance.



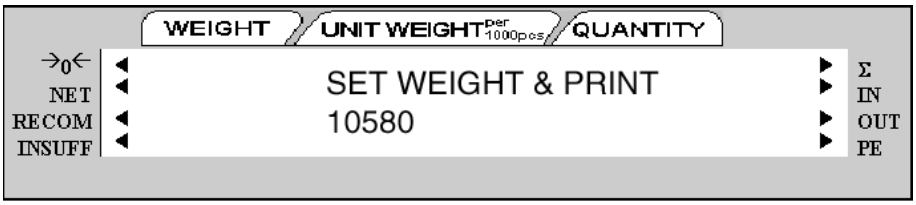
9. Press the **REZERO** key to clear the Internal Count shown in the weight window.



10. Press the * **REPRINT** key to enter the weight calibration setting.

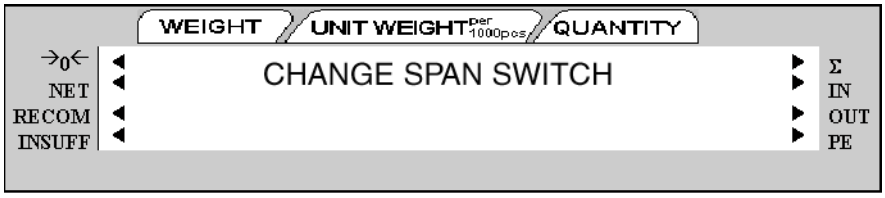


11. Put a calibrated weight on the platform equal to the total capacity of the scale (Example, for a 25 lb scale, place a 25 lb weight on the scale). Alternatively, you can enter the weight from the numeric keypad. The weight appears in quantity window. Press the * **REPRINT** key to save the calibration data.



The display confirms that the span settings for calibration of the scale are being saved

Finally the screen returns to the initial *CHANGE SPAN SWITCH*.



12. Once the span switch is turned off, the scale automatically returns to operation mode. The scale should now be powered off and restarted for the new settings to take effect.

5.0 Scale Operations

The following paragraphs contain detailed operator instructions for the DC-200/300 counting scale (see Figure 5-1). Included are instructions to enter tare weights, toggle between net and gross weight, enter unit weights, perform inventory accumulation and reduction, and toggle between scales. All operator instructions are conducted with the scale in the operation mode that is the weighing or normal mode.

Figure 5-1. DC-300 Counting Scale

Counting scale accuracy is primarily determined by the following factors:

- Sample size (number of pieces)
- Total sample size as a percentage of full scale capacity
- Piece-to-piece weight variation

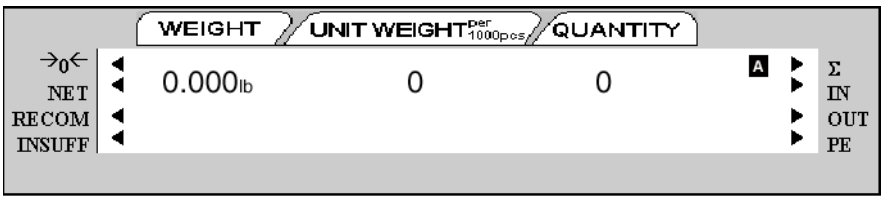
As a general rule when determining sample size of fairly uniform pieces, the larger the sample size the greater the total sample weight, therefore, the better the counting accuracy. Selecting the smallest capacity scale that can obtain the highest counting resolution should be considered, but should not sacrifice the capacity required for the heaviest container of parts. For this kind of application, a dual-platform scale may be the best selection.

There is a direct relationship between piece-to-piece weight variation (non-uniformity) and counting accuracy. Therefore, elimination of the piece-to-piece weight variations can be accomplished by:

1. Isolating the sample used to calculate the unit weight and use the same sample to re-check the scale.
2. Recalculating the unit weight from lot-to-lot of parts. Parts manufactured on one machine may vary slightly from another machine relative to weight.
3. Tightening the manufacturing tolerances on the parts reduces piece weight variations and increases count accuracy.

The Stand-By Screen

The starting point for using the scale in operation mode is the stand-by screen. At the stand-by screen the *WEIGHT, UNIT WEIGHT,* and *QUANTITY* displays show zeroes and the annuciator for the platform you are using is illuminated (A, B, C or D).



From the stand-by screen you can perform all of the basic weighing, counting and inventory operations of the scale.

5.1 Weight Unit Switching

Notes:

• *SPEC 600 SCALE UNIT SPECIFICATION sets the default weight unit to Grams, Kgs or Lbs.*

• *SPEC 642 WEIGHT/UNIT CONVERT must be set to "0: YES" in order for you to be able to switch weight units during weighing operations.*

The weight units displayed can be changed between Kg and Lb during weighing operations by pressing the **SHIFT DOWN** key followed by the **N** key.

5.2 Toggle Between Scales

To toggle between Scales A through D, press the **SCALE** key. The indicator lamp for the appropriate scale lights on the display.

Pressing the **SCALE** key rotates the scales available for selection as follows:

Only scales present will be selected (i.e. A two-scale system switches between Scale A and Scale B only.) If no external scales are connected, this function will not work.

5.3 Setting Tare Weights in Operation Mode

This section will describe the different tare-related operations you can perform from the operation mode. Tare weight can be set by one touch tare using the **TARE** key or, if the value is known ahead of time, can be entered digitally using the digital tare function. Tare addition and subtraction can also be done digitally or by using the **TARE** key. Finally, an existing tare stored with an Item code can be overridden with a new one if needed.

Note: *The following SPEC codes must be set properly to allow these operations before continuing: SPEC 620 TARE RANGE SETTINGS sets the limit of the tare range. SPEC 621 DIGITAL TARE and SPEC 622 DIGITAL TARE ACCUMULATION must be set to "1" to enable these functions. SPEC 623 DIGITAL TARE WHEN LOADED, SPEC 624 TARE SUBTRACTION FOR LOAD TARE ONLY, SPEC 625 TARE ADDITION FOR LOAD TARE ONLY, and SPEC 626 TARE VALUE EXCHANGE (FOR LOAD TARE) must all be set to "0" to enable these functions.*

5.3.1 One Touch Tare (When the Tare Weight is Unknown)

1. While at the stand-by screen, place a bin, box or other weight to be tared out on the platform.
2. Press the **TARE** key to subtract the tare weight. The *Net* annuciator will light up and the weight display should now show *0*.
3. If you remove the tare weight from the platform, the tare weight will show as a negative weight in the weight window and the *Net* annunciator will remain lit.

Note: *This tare weight will be overridden by the weight stored with an item code if you call up an item code at this point.*

4. To clear this tare weight and return to the operation mode, press the **TARE** key again. The net annunciator will not longer be lit.

5.3.2 Digital Tare (When Tare Weight is Known in Advance)

1. While at the stand-by screen, enter the known tare weight by using the numeric keypad.
2. Press the **TARE** key to subtract the tare weight. The *Net* annunciator will light up and the tare weight will be displayed in the weight display.

Note: *This tare weight will be overridden by the weight stored with an item code if you call up an item code at this point.*

3. To clear this tare weight and return to the operation mode, press the **TARE** key again. The net annunciator will no longer be lit.

Note: *For digital tare entry, the decimal must be in the appropriate place as it would be displayed in the weight display. For example,.250 would be entered as 0.250, not.250. The weight display shows weight entered with a negative sign indicating that it is a tare weight.*

5.3.3 Tare Addition or Subtraction

Two tares can be accumulated or subtracted using the **TARE** key as well. Tare weights cannot be accumulated or subtracted by digital entry, although you can do tare exchange by digital entry (Section 5.3.2).

Notes:

- *SPEC 620 TARE RANGE must be set to the appropriate tare range value. Default is "0: 100 PERCENT OF FULL SCALE".*
- *SPEC 621 DIGITAL TARE SETTING must be a "1: ENABLE" to allow digital tare.*
- *SPEC 622 DIGITAL TARE ACCUMULATION must be set to "1: YES".*
- *SPEC 623 DIGITAL TARE WHEN LOADED, SPEC 624 TARE SUBTRACTION FOR LOAD TARE ONLY, SPEC 625 TARE ADDITION FOR LOAD TARE ONLY, and SPEC 626 TARE VALUE EXCHANGE (FOR LOAD TARE) must all be set to 0: ALLOW or YES to enable these functions.*

1. Place the container, box or item to be tared on the platform and press the **TARE** key. The weight display should show 0 and the *Net* annunicator will illuminate.
2. Place another tare weight on the platform and press the **TARE** key again. This will add the two tare weights together (Tare Addition).
3. Tare weights can be subtracted individually by removing one from the platform and pressing the **TARE** key again. To clear all the tare weights and return to the operation mode, remove all the tare weights and press the **TARE** key. The *Net* annunicator will no longer be lit.

5.3.4 Tare Exchange or Override

This function allows you to change the tare value during the operation mode. You can change the tare weight without associating it with an item code, change the tare weight already associated with an item code while in registration mode, or add a tare value to an existing item code if it doesn't already have one. The new tare entered will overwrite the previous tare.

1. Remove any bin or container from the scale.
2. To change the tare weight without recalling an Item Code, go to Step 3.
3. To change the tare weight associated with an item code, enter the item code for which you want to change the tare value and press the **CODE** key. If there is already a tare weight associated with this item code in memory, it will be displayed in the Weight Display window.
4. If the tare weight value is known, use the numeric keypad to key in the value and then press **TARE**. The weight display will now show the new tare as a negative number and the *Net* annunciator will illuminate.

   If the tare weight value is not known, put the container to be tared out on the platter and press the **TARE** key. The new tare will be entered, the weight display will show 0.000 lb and the *Net* annunicator will illuminate.
5. You may now either place the product on the platter for weighing and counting or press the **CLEAR** key to return to the stand-by screen. To print a receipt or a label for the product, press the *** REPRINT** key while the product is on the platter. To clear the tare weight just entered when you return to the stand-by screen, press the **TARE** key again.

5.4 Toggling Between Gross and Net

To toggle between net and gross weight, a tare value must be entered into the scale. Follow Section 5.3 to enter a tare value.

Note: *SPEC 643 GROSS MODE DISPLAY must be set to 0: YES (which is the default) to enable gross mode.*

After a tare value is entered into the scale, items placed on the scale will cause the net annunciator to illuminate and allow toggling between net weight and gross weight. An example of toggling between net weight and gross weight is shown below:

1. Place 0.5 lb weight on the scale and then press **TARE** once. The weight display should show *0.000* lb.
2. Place another 0.5 lb weight on the scale. The scale weight display should now show *0.500* and the net annunciator should be illuminated.
3. Press **SHIFT DOWN + NET/G**. The weight display should show *1.000 GROSS WEIGHT*, the net annunciator will no longer be illuminated. The unit weight and the quantity displays go blank.

4. Press **SHIFT DOWN + NET/G**. The weight display should now show *0.500* and the net weight annunciator is illuminated again.

5.5 Entering Unit Weights

Entering unit weights can be done either by sampling, as presented in Section 5.5.1, or by key entry as described in Section 5.5.2.

Note: *SPEC 03 EXTENT OF INSUFFICIENT SAMPLES controls unit weight sampling. The default setting for the SPEC is 0.1 percent.*

Note: *SPEC 63 SAMPLE QUANTITY determines the number of pieces the scale assumes are on the platter when you press the PIECES key to calculate the unit weight. The default setting for the SPEC is 0: 10 pieces.*

Note: *SPEC 64 SCALE A <–> B sets whether the unit weight determined by sampling is automatically transferred from Scale A to Scale B. The default setting for the SPEC is 0: MANUAL.*

When you have a procedure that involves sampling an item's unit weight on the DC-200/300's built-in platform and then want to go immediately to weighing and counting boxes or bins on a floor scale or other external scale, set SPEC 64 to 1: AUTO. If the external Scale B is not necessarily going to be used for weighing the same item as is being sampled on Scale A, set SPEC 64 to 0: MANUAL.

Note: *SPEC 65 UNIT OF PCS WT controls whether the unit weight is displayed per 1000 pieces or per 1 piece. The default settings for this SPEC is 0: 1000 pieces.*

Unit Weight per 1000 Pieces vs. Unit Weight per 1 Piece

The scale's internal microprocessor calculates unit weights to 7 or 8 decimal places. However, the scale display generally can only show Unit Weight to 5 characters. If this Unit Weight is recorded from the scale display and entered by key entry, this can introduce errors in the Unit Weight and consequently in the counts. This error increases as the Unit Weight of the parts being counted decreases.

Example: A sample of 10 zener diodes is placed on the scale. The Unit Weight is computed to be 0.0006536 lbs. However, the scale has a 5 character display for Unit Weight so the scale can only display.0065 as the Unit Weight. If this Unit Weight were recorded and keyboard entered in future counting operations, the resulting error would be:

$$\frac{00065}{.0006536} = .55\%$$

On the other hand, with entry of the Unit Weight as "weight per 1000 pieces" the decimal place is, in effect, moved three places to the right, allowing 3 more decimal places of accuracy. In this example, the entry would be made as 0.6536 per 1000 pieces, eliminating the error.

As a practical note, entering unit weights per 1000 pieces also lessens the chances of entering the wrong number of zeros when keying in weights with many leading zeros. Misentry of unit weights is a common cause of inaccurate counting.

Note also that when SPEC 65 Unit of Pcs Weight is set to 1: Unit Weight per 1 piece (this is also called "average piece weight" or APW), the scale will not accept a sample that produces an APW of less than 0.01 lbs, regardless of the scale capacity. If the APW is less than 0.01 lbs, the error message *DATA INVALID* will appear to warn the operator that the part is too small to be counted using APW and that the unit weight/1000 pieces should be used to count this piece. Remember that if average piece weight (unit weights per 1 piece) have been stored in memory with an Item Code, these unit weights will not automatically be converted to unit weight per 1000 pieces when the item is recalled from memory. If you are changing SPEC 65 to operate using unit weight per 1000 pieces, you should update the unit weights associated with item codes in memory or eliminate the unit weights in memory and establish them by sampling or key entry at the time you recall the Item Code. (See Section 6.1.2 for more information on how to program items into memory).

When might you want to use unit weight per 1 piece? Generally in one of two cases:

1. If you are working with other existing systems or procedures that are already set up to record unit weight per piece (inventory systems, labeling requirements, etc).
2. If the unit weight or your pieces is more than 100 lbs, as in the case of some castings, engine parts and the like. When the unit weight is over 100 lbs, the number of digits in the scale's Quantity display will not be able to fully display counts of more than 100 pieces.

5.5.1 Unit Weight Operation by Sampling

Unit weight operation by sampling is accomplished by placing a 10 piece sample on the scale and then pressing the **PIECES** key. The scale calculates a unit weight based on the capacity of the scale compared to the weight of the sample. The following paragraphs detail the procedure with SPEC 7 - UNIT WEIGHT AUTO-RECOMPUTING either set at 0 or 1.

SPEC 7 - Unit Weight Auto-Recomputing Set to "0: No" (Default)

1. Press **REZERO** to zero scale.
2. Place 10 pieces of the item to be sampled on the scale.
3. Press **PIECES** key. If the sample weight is sufficient (*INSUFF* annunciator is off), the display shows a unit weight for 10 pieces. However, if the weight of the sample is insufficient (*INSUFF* annunciator is on) the display will show *---ADD XX PIECES*. Add the indicated number of pieces to the initial sample and then press the **PIECES** key again.
4. The display shows the total weight, unit weight and the quantity of the sample.

SPEC 7 - Unit Weight Auto-Recomputing Set to "1: Yes"

1. Press **REZERO** key to zero scale.
2. Place 10 pieces of the item to be sampled on the scale.
3. Press the **PIECES** key. If the weight of the sample is sufficient (*INSUFF* annunciator is off), the display shows a unit weight for 10 pieces. However, if the weight of the sample is insufficient (*INSUFF* annunciator is on) the display will show *---ADD XX PIECES*. Add the indicated number of pieces to the initial sample. The display then automatically recomputes the sample size and displays the unit weight and quantity of the sample.

5.5.2 Unit Weight Operation by Key Entry

Unit weight operation by key entry is accomplished by using the numeric keypad to enter the known value of the unit weight and then pressing the **UNIT WEIGHT** key. An example of unit weight operation by key entry is shown below:

1. With the display in the weighing mode, enter the known unit weight using the keyboard, for example, *200.00*.
2. Press **UNIT WEIGHT** key to enter the unit weight.
3. Place a 2 lb. weight on the scale. The scale displays the quantity for the weight placed on the scale, for example, the weight display reads *2.000*, the unit weight display reads *200.00*, and the quantity display reads *10*).

5.6 Setting the Default Label Format (DC-300 only)

A label format can be defined and attached to an item code when adding inventory items to memory (See Section 6.1.2). If you do not choose to associate a particular label format with an individual item code in the scale's memory, the internal printer will print the Default Label Format when a print operation is done (DEFAULT). You can also set a Default Label Format for the scale's internal printer to use when printing labels where no item code has been recalled from memory (DEFAULT - NON-ID).

To set which label format will be the Default format for item codes without a label format attached or when an item code is not recalled, follow the instructions below. To see other ways to temporarily change what label format prints during a given operation, please see Section 7.6.

1. At the stand-by screen, press the **MODE** key twice until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key 5 times until the display shows *GENERAL LABEL PROGRAM*.
3. To set the default label format for NON-ID printing (without recalling an item code), press **1**. To set the default label format for DEFAULT printing, press **2**. In either case, the bottom line of the display will allow you to select among the different preprogrammed label formats or free formats you have set up.
4. Use the **<<** or **>>** keys to scroll between formats until the label format you want is displayed. Press the **CODE** key to save the data and return to the *GENERAL LABEL PROGRAM* screen or press the **PIECES** key, followed by the **CLEAR** key to exit without saving the data.
5. Press the **MODE** key three times to return to the Stand-By screen.

5.7 Setting a Lot Number

When storing item codes in the scale's memory, you have the option to attach a lot number to that item. (See Section 6.1.2) That lot number will appear on an item label unless overridden by setting a new lot number during weighing operations. Lot numbers set during weighing operations can be temporary (not stored with the item code) or update and override the lot number stored in the item database.

- to print a label with the lot number that was previously entered with the item code, *SPEC 12 - KEEP LOT NO IN REGISTRATION MODE* can be set to either *0: ALLOW* or *1: INHIBIT* while *SPEC 70 - UPLOAD LOT AND PART NO* must be set to *0:DISABLE*.
- to set a lot number during counting, weighing or packing operations without having to store a new lot number with each individual item code and without changing lot numbers store with the item codes, *SPEC 12 - KEEP LOT NO IN REGISTRATION MODE* must be set to *0: ALLOW. SPEC 70 - UPLOAD LOT AND PART NO.* must be set to *0: DISABLE. SPEC 69 4 - LOT NUMBER* can be enabled to allow you to set and choose between four different lot numbers during the weighing mode.
- to set a lot number during counting, weighing or packing operations that will be stored with the item code in the item database, either overwriting the one previously programmed with the item code or adding one if one does not exist, *SPEC 70 - UPLOAD LOT AND PART NO* must be set to *1: ENABLE.*

Note: *Lot Numbers will only be printed if you have chosen a label format that includes that field (Pre-programmed Formats U2-4 through U6-8, U8-10 and T5-11 through T10-16 include the Lot Number and the Lot Number can be included on any of the Free Label Formats).*

1. At the stand-by screen, call up an item code by entering the code from the numeric and/or alphanumeric keyboards and pressing the **CODE** key. You have two options at this point:

   • If you want to print a label with a lot number has previously been entered, place the product on the platter and press the *** REPRINT** key.

   • To set a new lot number, press the **LOT NO** key and enter a lot number of up to 32 digits from the numeric keypad. If SPEC 69 - 4 Lot No is enabled, pressing the **LOT NO** key will let you select between as many as four lot numbers. Each time you press the **LOT NO** key you advance to the next lot number. Once you see the lot number you want to associate with the item you are weighing, put the product on the platter and press the *** REPRINT** key.
2. The process can be repeated for more item codes, keeping the lot number the same or entering a new lot number with each item code change.
3. When done, press the **CLEAR** key and remove the product from the scale platter.

5.8 Setting a Sequence Number (DC-300 only)

The scale can maintain and print a sequence number for transactions to aid in transaction tracking and auditing. While the sequence number field does not appear on any of the pre-programmed label formats, both a sequence number and a sequence number title can be programmed onto any of the free label formats (See Section 7.4.1 on page 90).

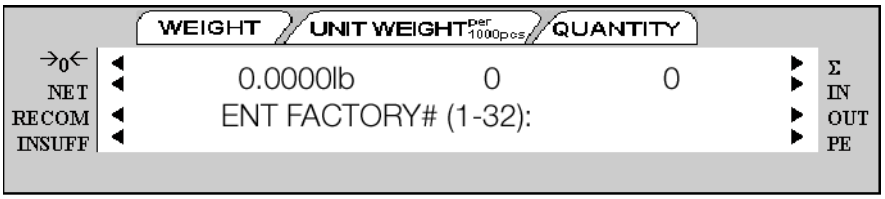
If the sequence number is set to "0", no sequence number will be incremented or tracked. Otherwise the sequence number will automatically increment by 1 each time a label is printed.

1. At the stand-by screen, press the **SHIFT DOWN** key followed by the **K** key. The display will show the current sequence number.
2. To set a new sequence number, enter up to 8 digits from the numeric keypad.
3. To save the new sequence number and exit, press the *** REPRINT** key. To exit without saving the new sequence number, press the **CLEAR** key twice.

5.9 Changing the Factory Name (DC-300 only)

The DC-300 can store up to 32 factory names in memory so that they can be printed on labels that include the Factory Name field. (For more information on how to program the Factory Name files, see Section 7.2.1 on page 74). The Factory Name that will be printed can be changed from the Weighing mode without going into the programming mode by doing the following:

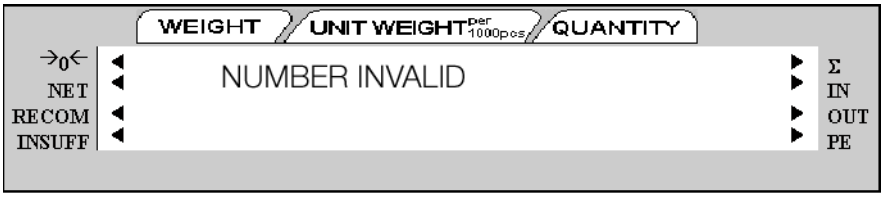
1. Press the **SHIFT DOWN** key, followed by the **LOT NO** key. The display will read:



2. From the numeric keypad, enter the number of the Factory Name you want to be active for label printing, then press the * **REPRINT** key.

   If the number you have entered corresponds to a Factory Name previously programmed in memory, the display will return to the Weighing mode. This Factory Name will now be printed on any label with the Factory Name field on it, until you change it by repeating the procedure above.

   If the number you have entered does not correspond to a Factory Name previously programmed in memory, you will see the following error message:



   Then the display will return to the Enter Factory # screen. At this point you can either enter the number of a valid Factory Name or press the **CLEAR** key to exit the Factory Name Change function and return to the Weighing mode.

   For more information on how to print a report of already programmed factory names, see Section 7.2.1.

5.10 Operations Without Recalling an ID Code

The following sections describe ways to run operations without having to recall the ID codes.

5.10.1 Using Item Codes and Part Names Without Storing Them to Memory

At times you may want to have an Item Code and Part Name print out on a label without storing them to the scale's item database memory. This can be done from the keyboard without leaving the weighing mode.

Note: *To enable the set new item without saving function, SPEC 04 SET NEW ITEM DURING REGISTRATION MODE must be set to "1:ALLOW (NOT SAVE)".*

1. Enter the item code and press the **CODE** key. The display will briefly show the message "*SET NEW ITEM (NOT SAVE)*" before returning to the standby screen.
2. Place a 10 piece sample on the scale and press the **PIECES** key or enter the unit weight from the numeric keypad and press the **UNIT WEIGHT** key. The display will flash briefly, then return to normal.
3. To set a tare value, enter the tare from the numeric keypad and press the **TARE** key or place the container to be tared on the platter and press the **TARE** key.
4. To add the Part Name, press the **SHIFT DOWN** key, followed by the **B** key. Enter the Part Name from the keyboard, then press the **SHIFT DOWN** key followed by the **B** key again to accept it.
5. Place the product to be weighed and counted on the platter and press the * **REPRINT** key to print a label with an Item Code and Part Name on it. The label will print in the default label format since no label format is associated with an Item Code not in memory. For more information on how to set the default label format, see Section 5.6.
6. You can clear the Item Code and Part Name that were temporarily stored by removing the product from the scale platter and pressing the **CLEAR** key.

5.10.2 Part Accumulation and Negative Counting - Without Recalling an Item Code

The DC-200/300 counting scale is fully capable of part number inventory tracking and maintenance using the stored item code function internal to the scale software. See Section 5.11.5 Adding Part to and Subtracting Parts From Inventory. Additionally, the scale has the capability to acquire the total number of parts using the accumulation or reduction function of the scale (similar to the add/subtract functions of a calculator).

Part Accumulation

To find the total accumulated quantity of similar containers filled with parts, use the accumulation procedure detailed below. This does affect the inventory quantity for this item in the scale's memory. To add or subtract from inventory, see Section 5.11.5.

1. Conduct a sampling process (Section 5.5.1) to determine the unit weight of the pieces.
2. Enter the known tare weight, or place an empty container on the scale to perform tare function (Section 5.3).
3. Place container 1 (full of parts) on the scale.
4. Press the **+** key to store the total in container 1. The memory annunicator% is now illuminated. The weight display briefly shows *totAL* and the quantity display shows the total pieces in the first container.

Note: *If SPEC 31 PC/PRN OUTPUT is set to "2: BY +/-/PRINT KEY", a label will be printed when you press the + key. The label will show the quantity in the container currently on the platform, not the accumulation. If SPEC 14 AUTO EXIT FROM ADD MODE is set to "0: NO", the scale will not automatically exit from displaying the total amount. To return to the weighing mode, press the CLEAR key.*

5. Remove container 1 and place container 2 (full of parts) on the scale.
6. Press the **+** key (total is equal to container 1 plus container 2, etc).
7. Continue with the remainder of the containers to be counted. The total number of parts stored in all the containers will be stored in the accumulation register.
8. To print a label in the default label format showing the total, press the *** REPRINT** key. This will also clear the accumulation register. The memory annunciator% is no longer illuminated.

Negative Counting

Just as you can count by adding parts to the scale, you can also count by removing parts from the scale. This is called "negative counting" because a negative weight is displayed while counting. Contrary to what may seem intuitively logical, you do not use the (-) key to do negative counting. The (-) key is only used to delete an entry in accumulation mode that you want to erase. This procedure does not affect the inventory quantity for this item stored in the scale. To reduce inventory, see Section 5.11.5.

Note: *To utilize the negative counting feature, SPEC 2 - NEGATIVE COUNTING must be set to "1: YES".*

There are two ways to do this depending on whether at the end you want to see the total amount remaining in the container or the total amount removed from the container.

Counting Out of a Full Container - See Total Amount Remaining in the Container

To carry out this operation you must know the tare weight ahead of time.

1. Place the full container on the scale. Press the **TARE** key.
2. Remove a 10 piece sample to the container and press the **PIECES** key. After the unit weight has been calculated, return the 10 piece sample to the container.
3. Remove a number of parts from the container and press the **+** key. The memory annunicator% is illuminated and the display shows the quantity of parts taken out.
4. Remove a number of parts from the container and press the **+** again. The memory annunicator% will be illuminated and the display shows the quantity of parts removed.
5. If at the end of the procedure, if you want to see how many are still in the bin you first have to know the tare weight of the bin or container. After removing the parts you want to take out of the bin, simply digitally enter the tare weight of the bin and press the **TARE** key. The scale will display how many parts were left in the bin. To print a label to put on the bin showing the new, lower, total quantity in the bin, press the **+** key.

Note: *If SPEC 14 AUTO EXIT FROM ADD MODE is set to "0: No", the scale will not auto exit from displaying the total amount. To return to the weighing mode, press the CLEAR key.*

Negative Counting - Total Removed Displayed at the End

With this procedure you can count accurately out of a full container for kiting, shipping, etc.without having to know the tare weight of the container.

1. Place a full container on the scale and press **TARE**.
2. Remove a 10 piece sample from the container and press **PIECES**. After the unit weight has been calculated, return the 10 piece sample to the container.
3. Remove the number of pieces you need for kiting, shipping, etc. The amount removed will be displayed. If you need a label for each kit or container, press the **+** key after removing each batch of pieces. Then press the **TARE** key.
4. When you have removed the last batch of pieces, press the * **REPRINT** key to show the total number of pieces you have counted out of the full container.

Clearing Accumulated Data

To clear accumulated data, press the ***REPRINT** key.

5.10.3 Sample, Count and Print a Label

Note: *For this function to be used on the DC-200, an external printer must be connected to the scale.*

1. Press the **REZERO** key to zero the weight display.
2. Place the empty bin on the scale and press the **TARE** key.
3. Place a 10 piece sample of the item in the bin and press the **PIECES** key. (for maximum accuracy, count the 10 piece sample into your hand and then add the entire sample to the bin at one time, instead of adding them one or two pieces at a time). If 10 pieces are not enough for the scale to get an accurate sample, the scale will prompt you to add a specific additional number of pieces. Add these pieces and press the **PIECES** key again.
4. Add the remaining pieces to be counted into the bin.
5. Press the * **REPRINT** key. The scale will print a label in the default label format.

5.10.4 Scan ID Bar Code, Count, and Print a Label

Note: *For this function to be used on the DC-200, an external printer must be connected to the scale.*

1. Enter the ID code by scanning the ID bar code.
2. Press the **REZERO** key to zero the weight display.
3. Place the container of the product on the scale platter.
4. Press the * **REPRINT** key. The scale will print a label in the default label format.
5. To print a label in the default label format showing the total, press the * **REPRINT** key. This will also clear the accumulation register. The memory annunciator *S* is no longer illuminated.

5.11 Using Item Codes in Normal or Operation Mode

The following paragraphs describe the procedure to recall item codes, recompute item code unit weights, quick add new item codes, override an existing tare associated with an item code, inventory operations related to the item code quantity, and delete an item code. All storage operations are done while the scale is in the operation mode.

5.11.1 Recalling Item Codes using Item Code Number

The following procedure allows you to view item codes stored in memory but will not change any of the information (Unit Weight, Tare Weight, Label Format, Part Name, Part Number, Lot Number, Location, Inventory Quantity, Threshold, Setpoints, and Address Number) stored with these codes.

Note: *This section assumes that SPEC 04 - SET NEW ITEM DURING REGISTRATION MODE is set to "1: NO". If SPEC 04 is set to "0: YES", you will be in the Quick Add mode.*

Note: *SPEC 67 - IMS determines whether or not the scale automatically tries to query the PC-based DIGI Inventory Management Software (IMS) via the DC-200/300's RS232 port. The default setting for this SPEC is 0: DISABLE. When SPEC 67 is set to 0: ENABLE, when an Item Code is entered and the CODE key is pressed, the scale will send that Item Code to the IMS software with a query, asking it to return the Unit Weight, Tare Weight, Label Format, Part Name, Part Number, Lot Number, Location, Inventory Quantity, Threshold, Setpoints and Address Number associated with that Item Code. For more information on the DIGI IMS software, contact your DIGI dealer.*

1. Enter item code number using numeric or alphabetic keypad.
2. Press the **CODE** key.

If an item code not stored in memory is entered, the scale will beep and briefly display the error message *ITEM CODE DOES NOT EXIST* before returning to the stand-by screen. At this point you can either enter a different item code or do a quick add to add an item to memory.

If an item code existing in memory is entered, the stored settings will be displayed after the **CODE** key is pressed. If the fields on the second line are too long to be viewed on the display, the line can be scrolled to the right and left using the **>>** and **<<** keys.

Press the **CLEAR** key to clear the item information and return to stand-by status.

5.11.2 View Item Information

The following procedure shows how to call up on the display a specific characteristic stored with an item code (unit weight, tare weight, label format, part name, part number, lot number, location, inventory quantity, threshold, setpoints, and address number). The data associated with the item in memory cannot be changed in this mode.

1. Recall the item from memory by entering the item code and pressing the **CODE** key.
2. You can now use the **SHIFT DOWN** key in combination with other keys to pull up various fields associated with the item code, without scrolling through them.

Key Stroke	Description
SHIFT DOWN + ! A ID CODE	ID Code
SHIFT DOWN + # B P. NAME	Part Name
SHIFT DOWN + $ C PART NO	Part Number
SHIFT DOWN + % D LOCATE	Location

Table 5-1. Item Codes

Key Stroke	Description
SHIFT DOWN + & E INVENT	Inventory
SHIFT DOWN + " F THHOLD	Threshold
SHIFT DOWN + (G SET PT	Set Point Press **>>** to view Set Point 2, **<<** to return to Set Point 1
SHIFT DOWN + : L ADDR	Address Number
SHIFT DOWN + LOT NO	Lot Number
SHIFT DOWN + @ K SEQ NO	Sequence Number

Table 5-1. Item Codes

3. To exit the view item information mode and return to the Stand-by or operation mode, press the **CLEAR** key.

5.11.3 Re-Computing Item Code Unit Weight

Note: *If you want the accuracy percentage of the recomputing to be displayed during the calculation, be sure that SPEC 9 DISPLAY ACCURACY UNIT WEIGHT CALCULATION DURING RECOMPUTING is set to "1: YES".*

1. Recall item code from memory (refer to Section 5.11.5).
2. Place items to be counted on the scale platter until the *RECOMPUTING* annunciator lights up.
3. Press the **PIECES** key for recomputing the unit weight. (This may take a few seconds.)
4. Press the **UNIT WEIGHT** key to store the new unit weight into memory. To exit without storing the new unit weight, press the **CLEAR** key.

5.11.4 Quick Add Item to Memory

The following procedure describes the steps used to add an item code to memory directly from the operation mode, without switching to programming mode.

Note: *To enable the quick add function, SPEC 04 SET NEW ITEM DURING OPERATION MODE must be set to "0: YES".*

1. After the item code has been entered, press the **CODE** key to store the new code. The display will briefly show the message *SET NEW ITEM (NOT SAVE)* before returning to the Stand-by screen.
2. Place a 10 piece sample on the scale and press the **PIECES** key or use the numeric keypad to enter known weight value (refer to Section 5.3.1 on page 37). Press the **UNIT WEIGHT** key a second time to store the weight value into the item code memory. The display will flash briefly, then return to normal. The unit weight is now stored. To exit without updating the unit weight for this item code, press the **CLEAR** key.
3. To set a tare value, enter the tare from the numeric keypad, press the **TARE** key to identify the value, then press the **UNIT WEIGHT** key to store the tare with this item code.
4. When ready to return to the operation or stand-by mode, press the **CLEAR** key.
5. To recall the item that has been stored via quick add, enter the item code and press the **CODE** key.

5.11.5 Adding Parts To and Subtracting Parts From Inventory

The DC-300 is a self-contained inventory control system, capable of tracking and reporting on stock, threshold and movement of up to 5,000 items. In order to track the inventory of an item, it must first have been programmed into the DC-300's memory. The following procedure is used to add inventory to and remove inventory from an item code's memory using the In and Out functions.

Note: *The Inventory IN function is enabled by pressing the* **SHIFT DOWN** *key followed by the* **I** *key; the Inventory OUT function by pressing the* **SHIFT DOWN** *key followed by the* **J** *key; and the Inventory NON-ADD function (so that the transaction does not affect the quantity in memory) by pressing the* **SHIFT DOWN** *key followed by the* **H** *key.*

When adding inventory quantities to an item code in memory you can add or subtract a single quantity or multiple quantities one after the other (if, for example, you are receiving, sending or counting several bins or boxes of the same part).

To Add or Subtract a Single Quantity to the Inventory of an Item Code in Memory

1. Recall the item from memory by entering the item code and pressing the **CODE** key.
2. To add a quantity to inventory, press the **SHIFT DOWN** key followed by the **I** key. The *In* annunciator illuminates. To subtract a quantity from inventory, press the **SHIFT DOWN** key followed by the **H** key. The *Out* annunciator illuminates.
3. If the tare weight and unit weight have already been associated with the ID code in memory, you can go the Step 5. Otherwise key in the known tare weight or scan the tare weight from a barcode or put the empty bin on the scale and press the **TARE** key.
4. If the weight unit has already been associated with the ID Code in memory, you can go to Step 5. Otherwise place a sample of 10 pieces in the bin on the scale. For accuracy it is best to put the pieces in the same bin used to find the tare weight in Step 3. Press the **PIECES** key.
5. Either pour into the bin the remaining pieces to be added or subtracted to inventory or, if the tare weight and the unit weight of the item were already programmed into the scale, put the full container on the scale. The DC-300 will display the quantity, unit weight, and total weight of the pieces of the container.
6. Press the *** REPRINT** key to add or subtract the quantity shown on the display to the amount already stored under the item code memory. The display will briefly say *Please Wait...* then return to normal.

Note: *If SPEC 31 - PC/PRN Output is set to 2: By +/-/PRINT KEY, a label will print when you hit the REPRINT key showing the count for this particular container in the default label format or the label format pre-programmed to be associated with this particular item.*

7. To view the updated inventory total, press the **SHIFT DOWN** key followed by the **E** key (for *INVENT*). The second line of the scale display will show the updated inventory quantity. To exit the inventory display, press the **CLEAR** key.
8. Remove the parts from the platter and press the **CLEAR** key to exit this item code. The *In* or *Out* annunicator will also light.

To Add or Subtract Multiple Quantities to the Inventory of an Item Code in Memory

1. Recall the item from memory by entering the item code and pressing the **CODE** key.
2. To add a multiple quantities to inventory, press the **SHIFT DOWN** key followed by the **I** key. The *In* annunciator illuminates. To subtract multiple quantities from inventory, press the **SHIFT DOWN** key followed by the **H** key. The *Out* annunciator illuminates.
3. If the tare weight and unit weight have already been associated with the ID code in memory, you can go the Step 5. Otherwise key in the known tare weight or scan the tare weight from a barcode or put the empty bin on the scale and press the **TARE** key.
4. If the weight unit has already been associated with the ID Code in memory, you can go to Step 5. Otherwise place a sample of 10 pieces in the bin on the scale. For accuracy it is best to put the pieces in the same bin used to find the tare weight in Step 3. Press the **PIECES** key.
5. Either pour into the bin the remaining pieces to be added or subtracted to inventory or, if the tare weight and the unit weight of the item were already programmed into the scale, put the full container on the scale. The DC-300 will display the quantity, unit weight, and total weight of the pieces of the container.
6. Press the **+** key. The memory annunicator will light up.
7. Remove the first container of parts from the platter and place the second container on the platter. Press the **+** key to add or subtract these parts to/from inventory.

8. Repeat Step 7 above until you are done adding or subtracting all the bins or boxes of this item.
9. Press the * **REPRINT** key to add or subtract the quantity shown on the display to the amount already stored under the item code memory. The display will briefly say *Please Wait...* then return to normal.

Note: *If SPEC 31 - PC/PRN Output is set to 2: By +/-/PRINT KEY, a label will print when you hit the REPRINT key showing the count for this particular container in the default label format or the label format pre-programmed to be associated with this particular item.*

10. To view the updated inventory total, press the **SHIFT DOWN** key followed by the **E** key (for *INVENT*). The second line of the scale display will show the updated inventory quantity. To exit the inventory display, press the **CLEAR** key.
11. Remove the parts from the platter and press the **CLEAR** key to exit this item code. The *In* or *Out* annunicator will also light.

5.11.6 Delete Item Memory

Deletion of an item code with all of its associated information (unit weight, tare weight, label format, part name, part number, lot number, location, inventory quantity, threshold, setpoints, and address number) can only be done from the item programming mode.

6.0 Scale Programming

The DC-200/300 can store information for the parts you count most frequently, eliminating the need for re-entering data during parts counting. With up to 5,000 item code numbers able to be programmed into your DC-200/300 counting scale, the scale can act as a stand-alone inventory system. If you have more than 5,000 items, or want to track inventory across multiple scales, the DC-200/300 can be connected to DIGI's PC-based Inventory Management System (IMS) software that allows an unlimited number of items. Call your DIGI dealer to find out more about how IMS can help you.

6.1 Item Code Storage

Before beginning to enter data about an item, the following need to have been defined ahead of time if you are going to attach them to this particular item: Free Label Formats (See Section 7.5), Setpoints (See Section 6.1.2), and Address Numbers (See Section 7.2.2)

In any entering of data on the DC-200/300, you can use the following functions of the alphanumeric keyboard:

Key	Description
	To move the cursor to change the entry to the right
	To move the cursor to change the entry to the left
	To select the top function or character of a character key
	To select the bottom function or character of a character key
	To shift between code typse for keyboard entry. Options are: • P:KEY - entering the letter or number corresponding to the key pressed • A - ASCII code selected by entering the hex code for the character • T - Teraoka code selected by entering the numeric value for the character Refer to Appendix 12 - Tables of Character Codes.
	To delete data
	To insert data
	To switch between upper and lower case
	To change font size
	To enter a space between characters.

Table 6-1. Item Storage Function Code Keys

6.1.1 Checking Memory Status

To see how many existing items have been programmed and how many items can still be stored, do the following:

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate
2. Press the **+** (plus) or **–** (minus) keys to scroll through the programming options until you see the memory status screen. The first line displays the number of items already programmed while the second line displays the number if item slots still available.
3. To exit the programming mode, press the **MODE** key until you are back at the stand-by screen.

6.1.2 Program ID Code, Unit Weight, Tare Weight, Label Format, Part Name, Part Number, Lot Number, Location, Inventory Quantity, Threshold, Setpoints, Address Number

This section details the procedure for storing the ID code, unit weight, tare weight, label format, part name, part number, lot number, location, inventory quantity, threshold, set points, and address numbers to be associated with an item code. You can enter all of this information for each item code or only the data pertinent to your application. Any field can be skipped without entering data by pressing the * **REPRINT** key. This will move you to the next field.

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the * **REPRINT** key to enter the item code programming mode. You store the data you have entered and exit the programming mode at any time by pressing the **CODE** key. To exit without saving your data press the **MODE** key.
3. Enter the item code number at the flashing cursor.

Note: *The maximum length of the field is 32 characters but depends on both the character size chosen and the size of the print area for that field on the Label Format selected in 5. below. The field can contain any of the characters on the alphanumeric keyboard but does not permit the additional ASCII characters available in Table 12-17 on page 160 for items 6-9 below.*

If you enter an Item Code that has already been stored in memory, the stored data will be displayed after you enter the Item Code and press the * **REPRINT** *key. You can continue cycling through the entry screens if you want to modify the stored data or press the* **MODE** *key to exit.*

To store the item code and go on to program the unit weight, press the * **REPRINT** key.

4. Enter unit weight value (refer to Section 5.5). This can be done by sampling if the unit weight is unknown or by digital entry if know. Press the * **REPRINT** key to store the unit weight data.
5. Enter Tare Weight (refer to Section 5.2). This can be done by placing the bin, box or container on the platform and pressing the **TARE** key or by digital entry. Press the * **REPRINT** key to store the tare weight. Note that if you enter a tare weight here to be associated in memory with this item code, when you recall an Item Code this stored Tare Weight will override any Tare Weight you have digitally entered into the scale or entered using the **TARE** key.
6. Select a label format for label printing. Use the **>>** and **<<** keys to move between the available formats. Press the * **REPRINT** key to store the label format.

Note: *You can choose one of the DC-300's pre-programmed label formats or one of the user-defined Free Label formats. See Section 7.5 for programming of Label Formats.*

Note: *For the next four entries: part name, part number, lot number and location entry, the maximum length of the field depends on both the character size chosen and the size of the print area for that field on the label format selected in 5. above. If a label format has been selected that does not use the field, then the maximum for any of the fields is one line of 85 characters. The field can contain any of the characters on the alphanumeric keyboard plus any of the ASCII characters available in Table 12-17 on page 160. To enter an ASCII code character, enter the hex value of the character from the table in Section 12.4.1 on page 133.*

To the left of the cursor, the screen displays the character size, number of characters remaining in the line at this character size, and the line number [Example: M3/32/01 indicates that the character size is M3, 32 more characters can be programmed on this line at this character size and we are on line 1 of this field.].

7. Enter the part name. Press the * **REPRINT** key to store the part name.
8. Enter the part number. Press the * **REPRINT** key to store the part number.
9. Enter the lot number. Press the * **REPRINT** key to store the lot number.
10. Enter the location code. Press the * **REPRINT** key to store the location code.

11. Enter the opening inventory amount up to a maximum of 8 digits. If you do not want to define an opening inventory amount here, this can be added to the record using the scale to count and accumulate the stock. (See Section 5.7)
12. Enter the threshold amount up to a maximum of 8 digits. This is an "optimal stock level" that will be used by the scale to show under-stocked and over-stocked items on the threshold report (See Section 9.3.1 on page 108). Press the * **REPRINT** key to store the threshold.

Notes:

• The DC-300 can store two setpoint values for each item.

•There are four types of setpoints which can be selected by rotating through them in the following order using the [+} key:% of Quantity (%QTY),% of Weight (%WT), Over/Under Quantity (QTY), or Over/Under Weight (WT).

• When entering weight setpoints, be sure that you enter in the weight values with decimal point and all leading and trailing zeros.

• All percentage values must be rounded to the nearest whole number, fractional percentages are not allowed.

• Setpoints involving% of quantity or weight are limited by the decimal places available on the display. For example: if Set Point value 1 specifies a Quantity of 9999999, then a Set Point value 2 of% of Quantity cannot be set for more than 100% because all 7 digits of the display are already in use.

Table 6-2 below shows what to enter in each of the two set point values to program each type of set point. The alarm sounds with a rhythmic beeping at setpoint one and with a rapid beeping at setpoint two. For the Setpoint buzzer to be activated, SPEC 10: SET POINT BUZZER must be set to "0: BUZZER ON". See Section 3.1.1 for setting spec codes.

	% QTY	QTY	% WEIGHT	WT
Program Set Point 1 value with . . .	target quantity	low value	target weight	low value
Program Set Point 2 value with . . .	% of quantity	target value	% of weight	target value

Table 6-2. Setpoint Configuration

Here are some examples of how the setpoints can be programmed. These examples can be adjusted to fit your application.

Setpoint Types	% QTY	QTY	% WEIGHT	WT
Setpoint 1	80 pieces (target)	50 pieces	2.0 lb (target)	1.2 lb
Setpoint 2	80%	75 pieces (target)	50%	1.5 lb (target)
Equation	80 x 80% = 64	N/A	2.0 x 50% = 1.0	N/A
Slow Beeping Occurs At	64 pieces	50 pieces	1.0 lb	1.2 lb
Rapid Beeping Occurs At	80 pieces	75 pieces	2.0 lb	1.5 lb

Table 6-3. Setpoint Examples

13. Use the << and >> keys to choose what type of setpoint value you want to enter. Enter the first setpoint value. Press the * **REPRINT** key to store the setpoint.
14. Repeat Step 13 for the second setpoint value. Press the * **REPRINT** key to store each setpoint value after entering it.

Note: *The next step is skipped if a) no address numbers have been previously programmed in. (See Section 7.2.2 on how to program an address), or 2) if the label format selected for this Item does not include an area to print out an address.*

15. Choose the address number to be associated with this item by entering its number on the numeric keypad. Press the * **REPRINT** key to store the address number.
16. Press the **CODE** key to save all the data you have entered associated with this item or press the **MODE** key to exit without saving the data.
17. Press **MODE** key three times to exit the programming mode and return to the stand-by screen.

6.1.3 View Item Codes in Memory

The following procedure allows viewing item codes stored in memory but will not change any of the information (unit weight, tare weight, label format, part name, part number, lot number, location, inventory quantity, threshold, setpoints, and address number) stored with these codes.

Note: *This section assumes that SPEC 04 - SET NEW ITEM DURING REGISTRATION MODE is set to "1: NO". If SPEC 04 is set to "0: YES", you will be in the Quick Add mode (See Section 6.2.2 below).*

Starting in the registration or standby mode, item codes can be recalled by entering the item code using the numeric or alphabetic keys on the keyboard and pressing the **CODE** key.

If an item code not stored in memory is entered, the scale will beep and display the error message "*ITEM CODE DOES NOT EXIST*", then return to the Stand-by Screen.

If an item code existing in memory is entered, the stored settings will be displayed after the **CODE** key is pressed. If the fields on the second line are too long to be viewed on the display, the line can be scrolled to the right and left using the **>>** and **<<** keys.

Press the **CLEAR** key to clear the item information and return to stand-by status.

6.1.4 Delete Item Memory

To just clear an individual field associated with an item code, follow the programming instructions in Section 6.1.2 and press the **CLEAR** key when the data to be deleted is displayed. Be sure to save your changes at the end of the programming mode by pressing the **CODE** key.

The following procedure describes the steps used to delete ALL information stored within each item code (unit weight, tare weight, label format, part name, part number, lot number, location, inventory quantity, threshold, setpoints, and address number).

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate
2. Press the * **REPRINT** key to enter the item code programming mode.
3. Enter the item code number for the item you want to delete, and then press the **–** (minus) key to enter the deletion function.
   - If the Item Code does not exist in memory, the scale will briefly display the message "*ITEM CODE NOT EXIST*" before returning to the program ID code mode. Use the **CLEAR** key to erase the incorrect item code and then enter a correct Item Code to delete.
   - If you have entered an existing Item Code, the display will ask you to confirm if you want to delete. Press the **CLEAR** key to delete this *Item Code* and all of its data or press the **TARE** key to cancel the deletion. If you press the **CLEAR** key, the display will ask you to confirm if you want to delete.
4. Press the **MODE** key three times to exit the programming mode and return to the Stand-by screen.

6.2 Uploading and Downloading Items Between the Scale and a Computer

Your Service Tools CD that comes with the DC-300 includes a software program called the DC-300 Utility. It allows you to upload the inventory items you have stored in your DC-300 to an IBM-compatible PC and download them to that same or another DC-300. This allows you to have a back up of your data for general protection against data loss or for back ups if your scale should need servicing that might involve clearing its memory. This feature can be used to copy the inventory item files from one DC-300 to another, setting them up to have the same data without having to completely re-enter the information when adding a scale to your system. It can also be used when the tasking of the scale will change temporarily, but you want to restore the item data later. Examples might be where the DC-300 has been set up to work in a kiting operation or quality control but needs to be pulled out for use in a cyclical or periodic inventory count. Another possibility would be if the scale is to be loaned to another plant for a short-term need. You can upload the item information to the computer, then use the scale in the other task including adding items to memory if needed for that operation. To restore the scale's item programming after the temporary task is done, simply download the item files back into the DC-300 using the DC-300 Utility program.

6.2.1 Item Database File Format

This utility will also allow you to compile an item database in Microsoft Excel which can then be downloaded to the scale. In some situations this may be easier than entering the data directly from the DC-300's keyboard. The Item database is imported or exported in CSV format which can be opened in Microsoft Excel. The column order and structure of the file is fixed as shown in Table 6-4 below. If the CSV file is not formatted and structured according to the structure shown below, data may be lost or the communication aborted during the download.

When you install the DC-300 Utility, the installer provides a conversion format file in the...Digisoft\DC-300 Scale Sytem\Formats\PLUFormat.cfg folder. This conversion configuration file aids in converting the CSV file into something that the DC-300 database can read. For the conversion to work properly, the fields have to be in the same order in the CSV file and the format file. Since the data is rendered as a CSV comma-delimited file, you cannot include any commas in the data nor use the comma for European-style decimal points.

CA_PLUFile Field	Description	Max Length	Data Type
IDCodeCharSize	ID Code Character Size	2	See Note 2 below
IDCodeName	ID Code Name	32	See Note 1 below
PartNameCharSize	Part Name Character Size	2	See Note 2 below
PartName	Part Name	32	See Note 1 below
PartNoCharSize	Part Number Character Size	2	See Note 2 below
PartNo	Part Number	32	See Note 1 below
LotNoCharSize	Lot Number Character Size	2	See Note 2 below
LotNo	Lot Number	32	See Note 1 below
LocCharSize	Location Character Size	2	See Note 2 below
Location	Location	32	See Note 1 below
PLUTare	Tare Weight	6	5 numeric + decimal
Label1Format	Label 1 Format	2	See Note 3 below
UnitWeight	Unit Weight	6	5 numeric + decimal
Inventory	Inventory	8	Integer
Threshold	Threshold	8	Integer
SetPtType	Set Point Type	1	0 (QTY%), 1 (WT%), 2 (QTY), 3 (WT)
SetPt1	Set Point 1	8	depends on setpoint type
SetPt2	Set Point 2	8	depends on setpoint type
ItemAddr	Item Address Number	2	1-16

Table 6-4. Item Database Format

Note 1: Available characters are alphanumeric, space,!, “, $,%, &, (,), *, @,:,:, +, -, /

Note 2: 0=>S1, 1=>S2, 2=>S3, 3=>S4, 4=>S5, 10=>M1, 11=>M2, 12=>M3, 13=>M4, 14=>M5

Note 3: Refer to the following table to specify the format number.

Label Format	Code	Label Format	Code	Label Format	Code	Label Format	Code
S	80	T3	86	T9	8C	F3	3
A	81	T4	87	T10	8D	F4	4
B	82	T5	88	T11	8E	F5	5
C	83	T6	89	T12	8F	F6	6
T1	84	T7	90	F1	1	F7	7
T2	85	T8	91	F2	2	F8	8

Table 6-5. Label Format Codes for Item Database File

6.2.2 Installing the DC-300 Utility Program

1. Place the DC-300 CD-ROM in your computer's CD-ROM drive and go to the Windows Run menu.
2. When the Run dialog box appears, click on the Browse button and select your computer's CD-ROM drive. Double click on the folder labeled "*Item_Spec download tool*". Next, double-click on the appropriate folder for the version of Microsoft Windows your computer is operating on:
   - for Windows 2000, Windows NT or Windows XP, double-click on the "WIN 2K_XP_NT" folder.
   - for Windows 95 or Windows 98 users, double-click on the "WIN 95_98" folder.
3. Double-click on the "Setup" file or highlight the "Setup" file and click the **Open** button. You will be returned to the "Run" dialog box.

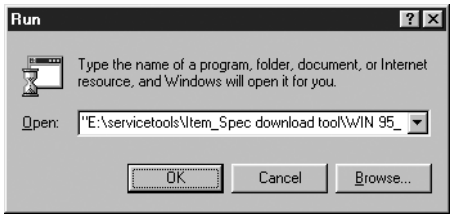


Figure 6-1. Run Spec Download Installation

Click on the **OK** button to launch the installation program.

4. You will see the "DC-300 Utility Setup Wizard" screen below.

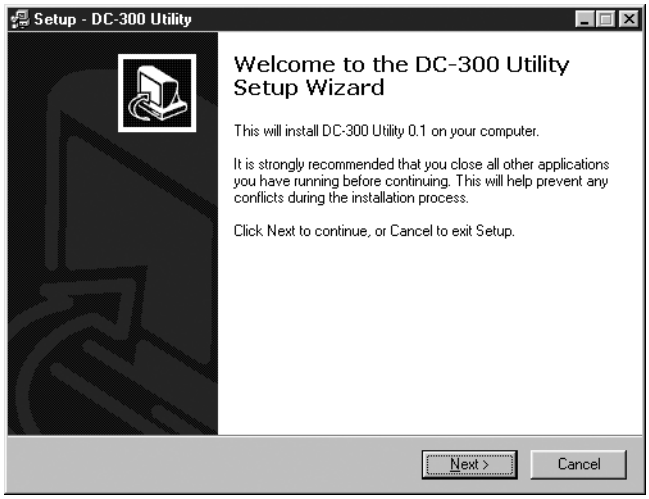

Setup - DC-300 Utility
Welcome to the DC-300 Utility Setup Wizard
This will install DC-300 Utility 0.1 on your computer.
It is strongly recommended that you close all other applications you have running before continuing. This will help prevent any conflicts during the installation process.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

Figure 6-2. DC-300 Utility Setup Wizard

Close all other applications that may be running and click on the **Next** button.

5. The installation program will prompt you to select the directory into which you want to install the DC-300 Utility software. You can accept the default or use the explorer window to navigate to the directory you want. Click on the **Next** button.

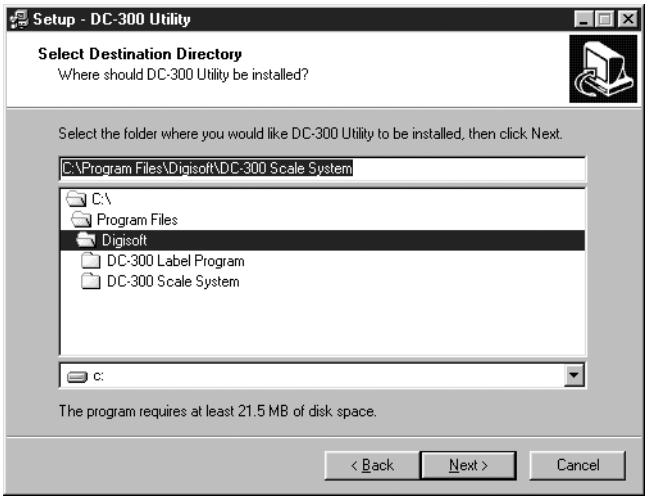

Setup - DC-300 Utility
Select Destination Directory
Where should DC-300 Utility be installed?
Select the folder where you would like DC-300 Utility to be installed, then click Next.
C:\Program Files\Digisoft\DC-300 Scale System
C:\
Program Files
Digisoft
DC-300 Label Program
DC-300 Scale System
c:
The program requires at least 21.5 MB of disk space.
< Back
Next >
Cancel

Figure 6-3. Pick Destination Directory

Click the **Next** button.

6. You can next choose the Windows Start Menu Folder that the DC-300 Utility's shortcuts will appear. By default they will appear in a folder called "DC-300 Utility". You can choose another Start Menu Folder from the list displayed.

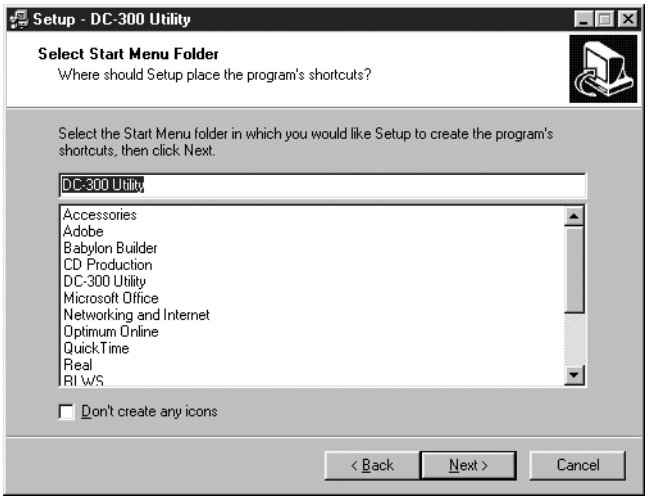


Figure 6-4. Select Start Menu Folder

Click the **Next** button.

7. The installation program will now ask you to confirm your selections. If you need to change any of the

installation parameters, click on the **Back** button.

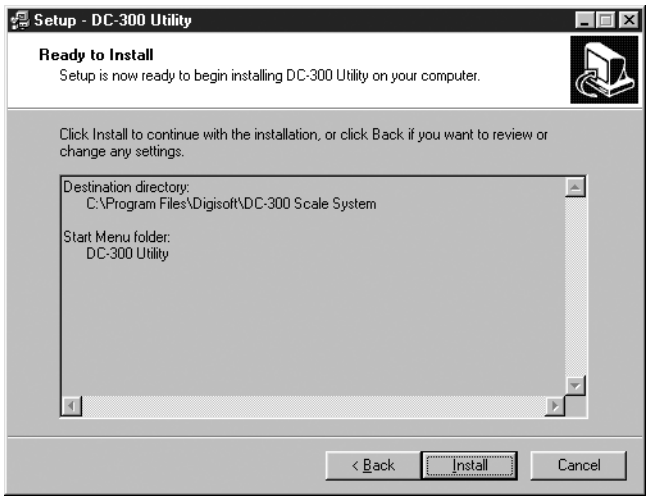

Setup - DC-300 Utility
Ready to Install
Setup is now ready to begin installing DC-300 Utility on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination directory:
C:\Program Files\Digisoft\DC-300 Scale System
Start Menu folder:
DC-300 Utility
< Back
Install
Cancel

Figure 6-5. Confirm Installation Selections

Press the **Install** button to begin the installation of the DC-300 Utility Program files.

8. The Setup Wizard will display the progress of your installation.

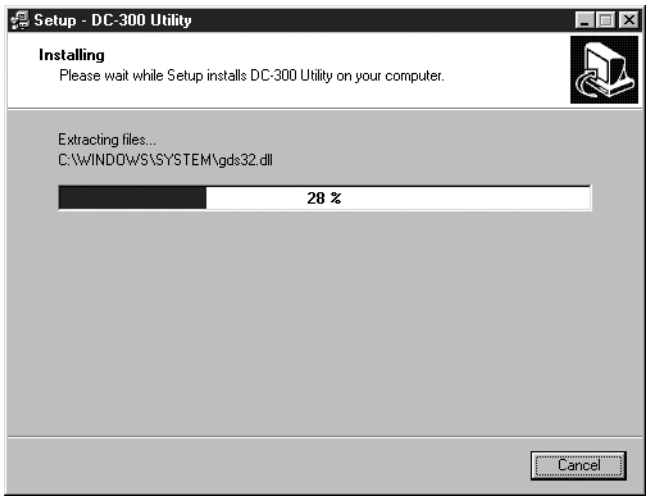


Figure 6-6. Installation in Progress

9. Once the copying of files is complete, the Setup Wizard will ask you if you want to restart your computer

to complete the installation.

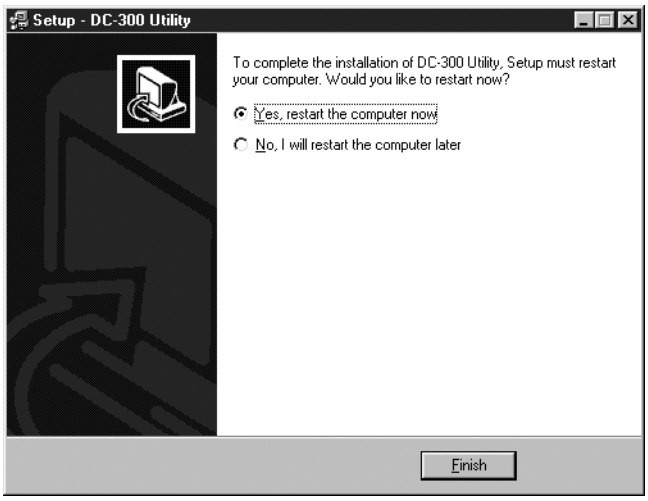

Setup - DC-300 Utility
To complete the installation of DC-300 Utility, Setup must restart your computer. Would you like to restart now?
Yes, restart the computer now
No, I will restart the computer later
Finish

Figure 6-7. Restart Computer

Once you have restarted your computer, you are ready to use the DC-300 Utility Program following the instructions in Section 6.2.3.

10. Remove the DC-300 CD-ROM from your computer's CD-ROM drive and store it in a safe place for future use.

6.2.3 Item Uploading From the Scale

If you have not already configured your computer for communication to your DC-300 scale, please see See “Network Connection” on page 117. before proceeding.

1. In Windows, use the Start menu, then the Program menu to display the programs installed on your computer. Unless you specified otherwise during installation, the program will appear in the Start Menu folder labeled “DC-300 Utility”. If you would like to put a shortcut to this program on your Windows desktop, drag and drop the program from the Program menu onto your desktop. Click on the program in the Programs menu or double-click on the shortcut to launch the application.
2. The main utility screen appears below.

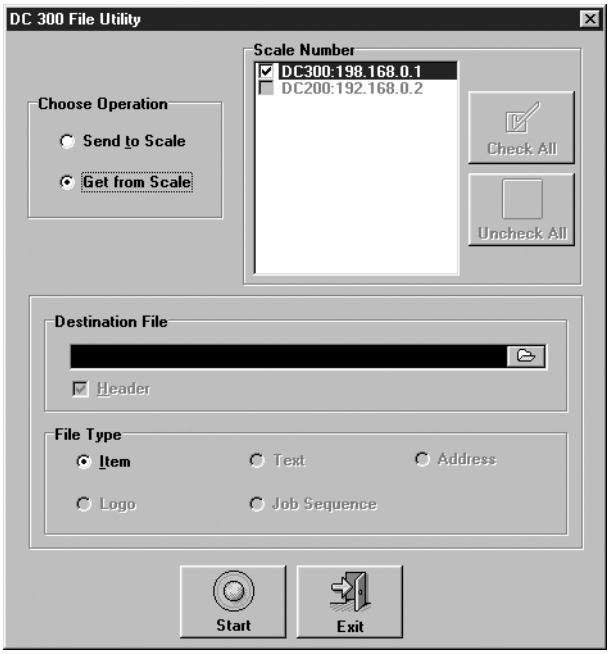


Figure 6-8. DC-300 Utility Main Uploading Screen

In the Scale Number box, select the scale from which you want to upload the Item database by clicking in the check box next to it. If it is not already selected, click on the radio button for “Get From Scale”. Also make sure that the File Type is marked as Item. Then click on the folder icon in the Destination File frame.

3. In the Save As dialog box, enter a file name in the “File Name” field or choose one of the Existing Files listed below.

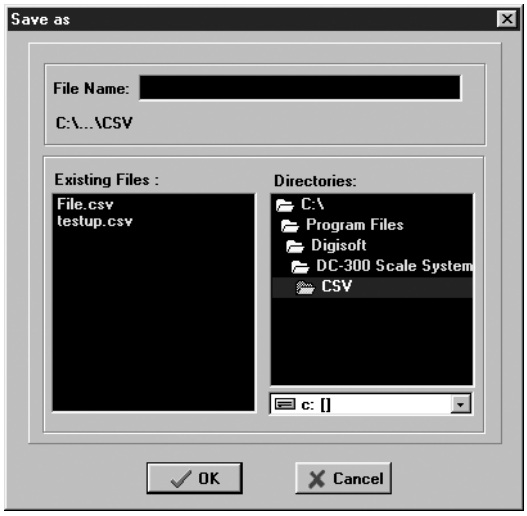


Figure 6-9. Choose File Name

If you choose an existing file, be sure that you want to overwrite the data previously stored under that file name. If you enter a new file name, give it a ".csv" extension. You can also use the Directories explorer window to choose what directory to save the upload file in. When done specifying the File Name, click on the **OK** button. You will be returned to the DC-300 File Utility main screen.

4. Click on the **Start** button. The upload will begin and the computer will display the progress.

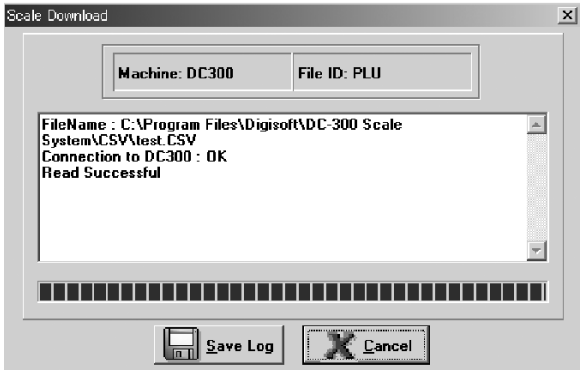


Figure 6-10. Upload Progress

If you want to save the log data from the download, click on the **Save Log** button. You will be prompted to give this database file a file name of your choosing. If not needed, click on the **Cancel** button.

5. The DC-300 utility will map the item data uploaded from the scale to the CSV file format shown in

Table 6-4 and display it in the “View” screen.

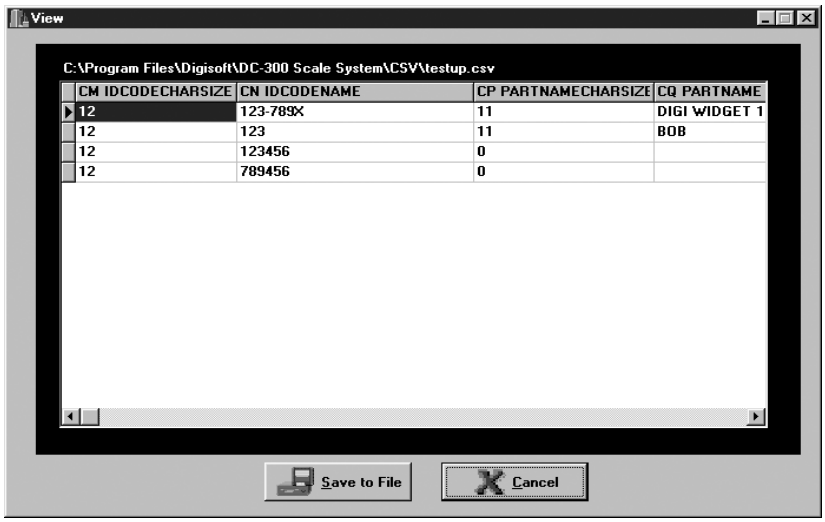


Figure 6-11. Item Data Mapping

Click on the **Save to File** button to save the data under the file name and directory you assigned in Step 3 above. When you click on the **Cancel** button, you will be returned to the main DC-300 File Utility Screen.

6.2.4 Item Downloading To the Scale

If you have not already configured your computer for communication to your DC-300 scale, please see Section 11.0 before proceeding.

1. In Windows, use the Start menu, then the Program menu to display the programs installed on your computer. Unless you specified otherwise during installation, the program will appear in the Start Menu folder labeled “DC-300 Utility”. If you would like to put a shortcut to this program on your Windows desktop, drag and drop the program from the Program menu onto your desktop. Click on the program in the Programs menu or double-click on the shortcut to launch the application.

2. The main utility screen appears below.

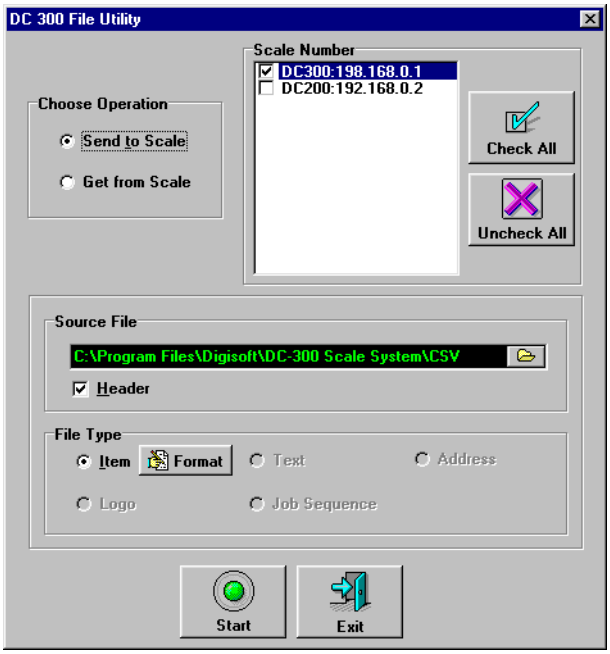


Figure 6-12. DC-300 Utility Main Downloading Screen

In the Scale Number box, select the scale to which you want to upload the Item database by clicking in the check box next to it. If it is not already selected, click on the radio button for "Send to Scale". Also make sure that the File Type is marked as Item. Then click on the folder icon in the Source File frame.

3. In the Open dialog box, enter an existing Item database file name in the "File Name" field or choose one of the Existing Files listed below. If you do not see the Item database file you want to download to the scale, you can use the Directories explorer window to browse for the file.

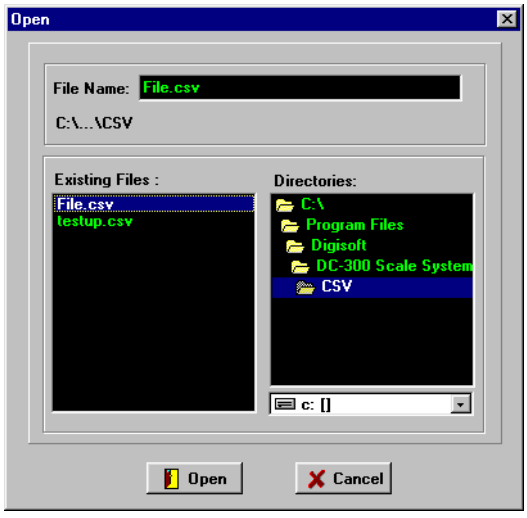


Figure 6-13. Select File to Download

When you are done identifying the file to be downloaded, click on the **Open** button. You will be returned to the DC-300 File Utility main screen.

4. If the CSV file to be imported into the scale (downloaded to the scale) contains a header showing the field titles, make sure that the Header check box in the Source File frame is checked, telling the program to read the data starting with the second line of the CSV file. If the CSV file with the Item database data does not have a header file, leave the Header check box empty or click on the check box to clear it if it has already been checked. If you are not sure whether or not the CSV file has a header row, open the file in Microsoft Excel and check it.
5. Click on the **Format** button next to the Item radio button in the File Type frame. This will open the Import Option dialog box.

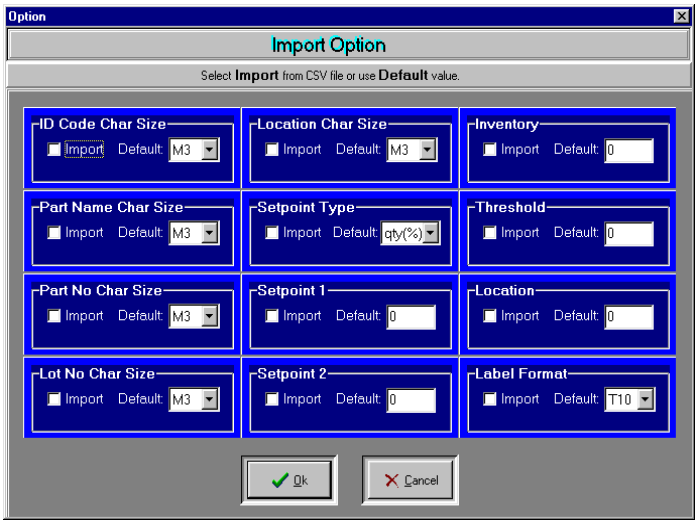


Figure 6-14. Item Database Import Options

This screen allows you to choose whether to use the default character sizes for the different fields in the Item database or to specify changes. If you are using the DC-300 utility to make the Item databases in two different scales match by uploading the database from one scale and downloading it to another, check the Import check box for each field. If you want to change any of the character sizes to be used on the DC-300's printer, use the drop-down boxes to choose a character size for each field.

When you are done formatting the characters sizes, click on the **OK** button. You will be returned to the main DC-300 Utility screen.

6. Click on the **Start** button. The DC-300 Utility will map the item data to be downloaded to the scale.

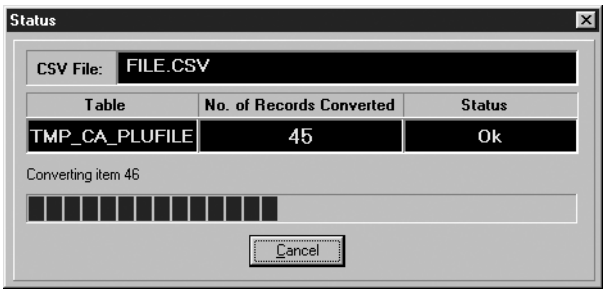


Figure 6-15. Item Data Download Mapping

Once the data has been mapped to a form that the scale can receive, it will display the data in grid form.

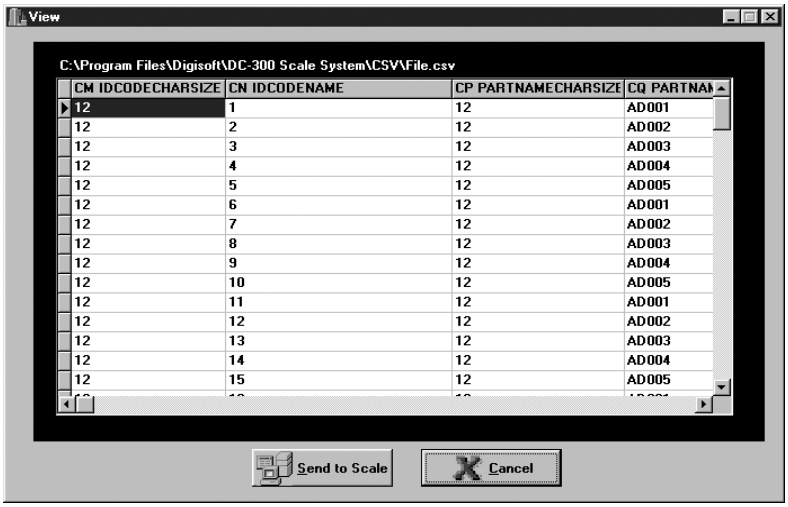


Figure 6-16. Item Download Data Grid

Click on the **Send to Scale** button to write the data to the scale.

7. The DC-300 Utility will show the download progress and then confirm the success of the download.

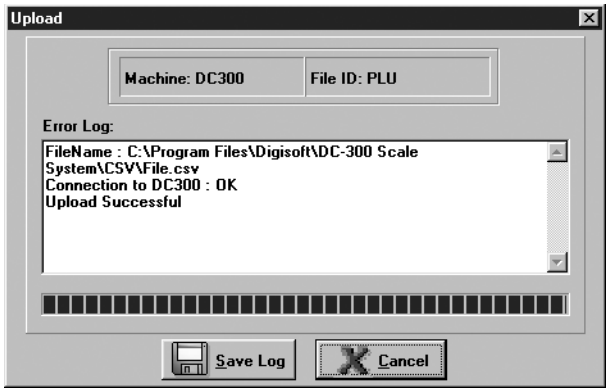


Figure 6-17. Item Database Download Progress

If you want to save the log data from the download, click on the **Save Log** button and you will be prompted to assign the log a file name and directory. If not needed, click on the **Cancel** button. The program will return you to the main DC-300 Utility screen.

8. To leave the DC-300 File Utility Program, click on the **EXIT** button.

7.0 Printing Labels (DC-300 only)

Note: *Chapter 7.0 Printing Labels deals with the DC-300 scale only*

One of the most useful features of the DC-300 is the ability to set up your own label formats, defining which fields you want to include, at what size and in what position on the label. The DC-300 gives you three ways to set up labels:

- by using one of the 16 preprogrammed or standard label formats (see Section 7.1.2);
- by using the DC-300 Label Editor software to design a label and then download it to the scale (see Section 7.3);
- by designing a Free Format label. Up to 99 user-designed formats can be stored in the scale (see Section 7.5).

The following sections describe loading labels or paper into the DC-300's built-in printer, programming fields that can appear on labels, and the different ways to format and print labels.

7.1 Thermal Label Printer

7.1.1 Available Label Types

The DC-300's built in printer can accept a variety of sizes and types of labels. Label rolls must have a 40mm core, be wound with the labels facing outwards, and have a maximum diameter of 105 mm.

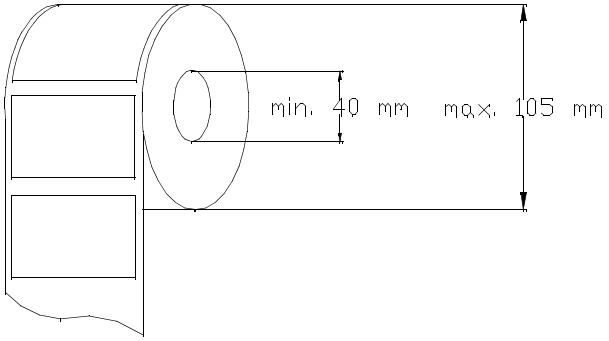


Figure 7-1. Label Roll Dimensions

The DC-300 comes with 16 pre-programmed label formats and can store up to 99 free formats that can be defined by the user. Item codes stored in the DC-300's inventory database can have a label format associated with them (see Section 6.1.2) or the label format can be temporarily set when manually printing a label (see Section 7.4). Samples of each of the label types are shown in Section 7.1.2.

Label Type	Dimension (Width X Length)	Label Type	Dimension (Width X Length)
A1	60 X 55 mm	B2	60 X 55 mm
C3	60 X 55 mm	U2-4	60 X 55 mm
U3-5	60 X 95 mm	U4-6	60 X 95 mm
U5-7	60 X 95 mm	U6-8	60 X 120 mm
U7-9	60 x 120 mm	U8-10	60 x 120 mm
T5-11	60 X 120 mm	T6-12	60 X 120 mm
T7-13	60 X 120 mm	T8-14	60 X 120 mm
T9-15	60 X 120 mm	T10-16	60 X 120 mm
Free Formats F1-F99	60 mm (max) X 120 mm (max)		

Table 7-1. Label Type Dimensions

7.1.2 Label Format Samples

Figure 7-2. Label Format A1 - 60 X 55 mm

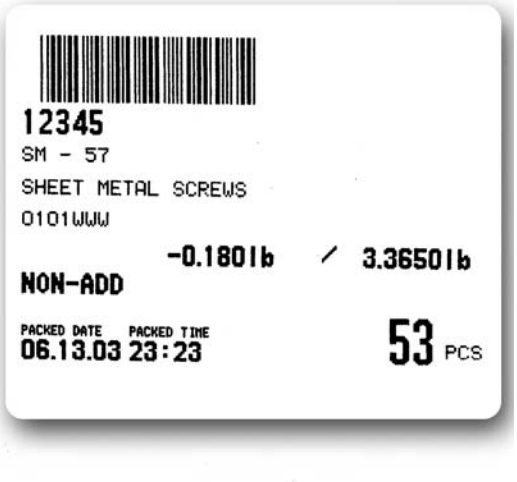


Figure 7-4. Label Format C3 - 60 X 55 mm

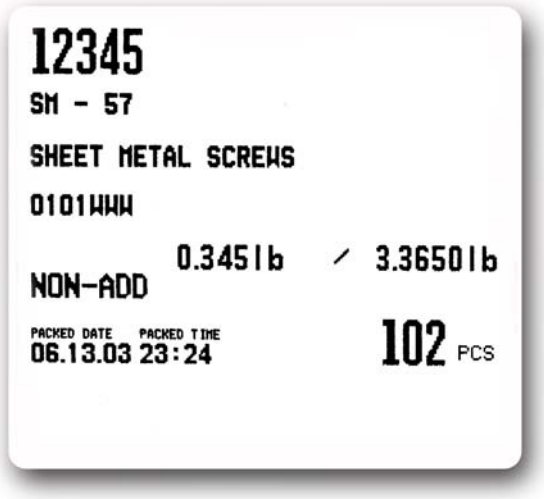


Figure 7-3. Label Format B2 - 60 X 55 mm

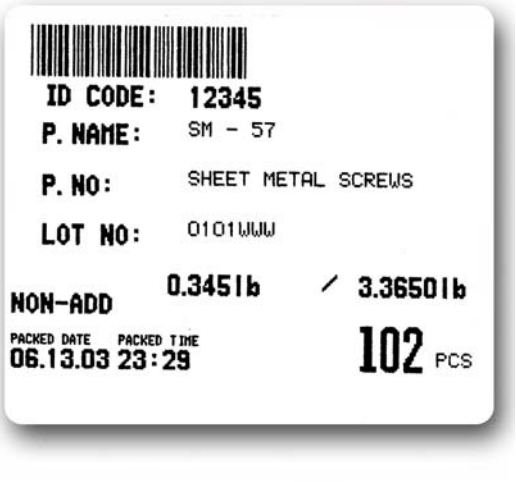


Figure 7-5. Label Format U2-4 - 60 X 55 mm

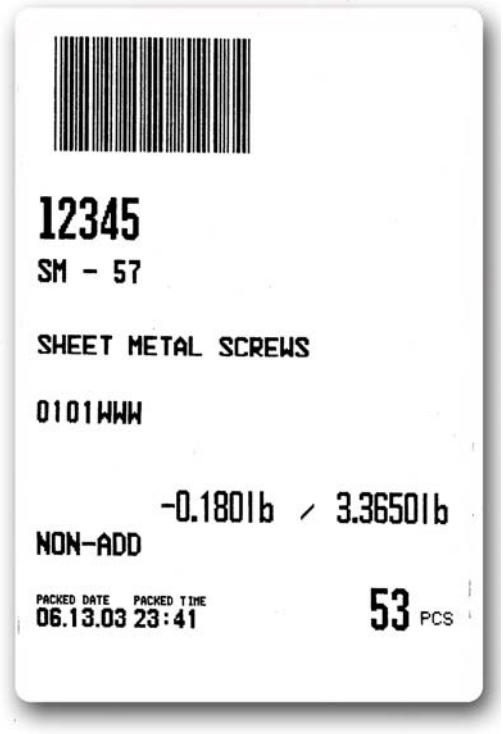


Figure 7-6. Label Format U3-5 - 60 X 95 mm

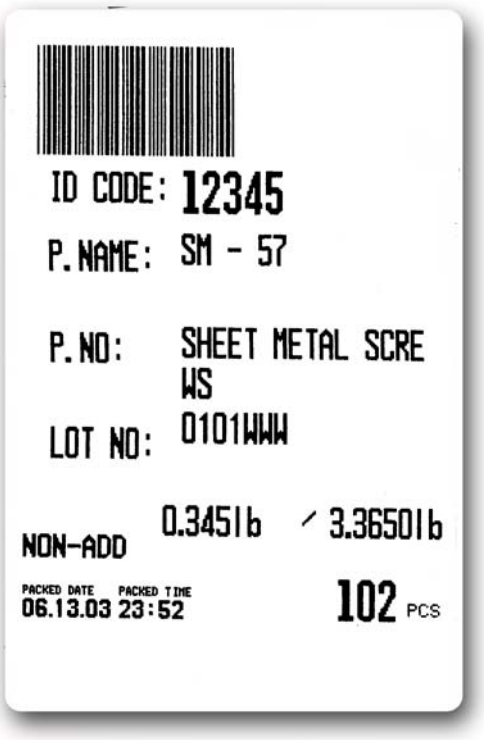


Figure 7-8. Label Format U5-7 - 60 X 95 mm

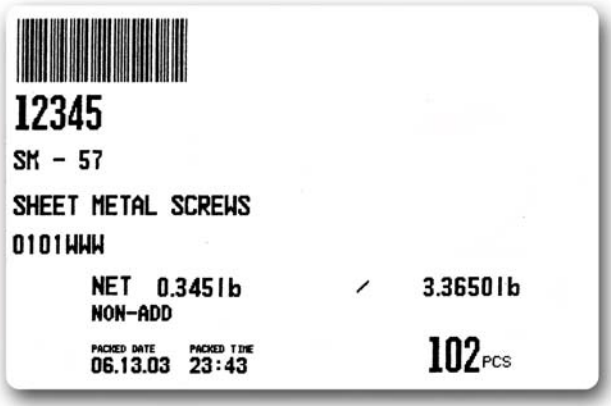


Figure 7-7. Label Format U4-6 - 60 X 95 mm

Figure 7-9. Label Format U6-8 - 60 X 95 mm

Figure 7-10. Label Format U7-9 - 60 X 120 mm

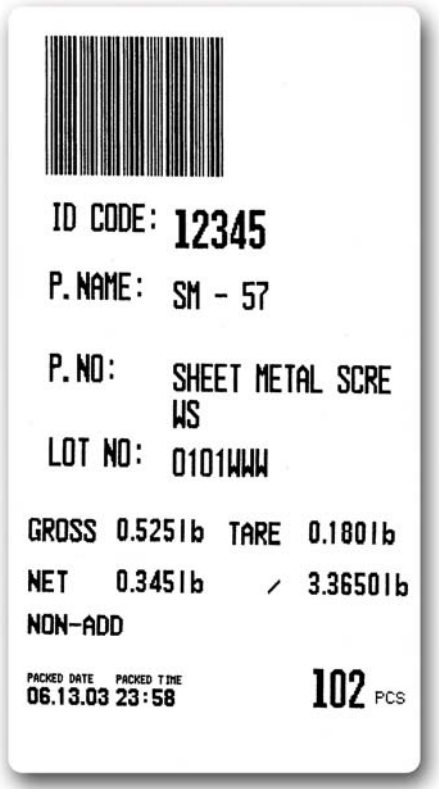


Figure 7-11. Label Format T5-11 - 60 X 120 mm

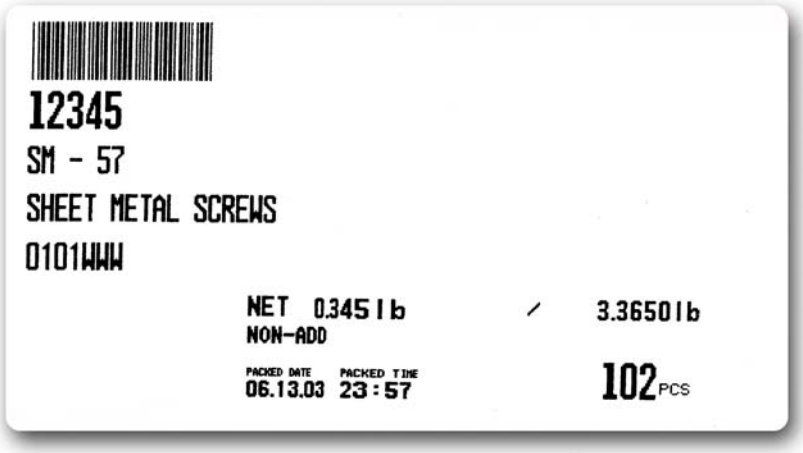


Figure 7-12. Label Format U8-10 - 60 X 120 mm

Figure 7-13. Label Format T6-12 - 60 X 120 mm

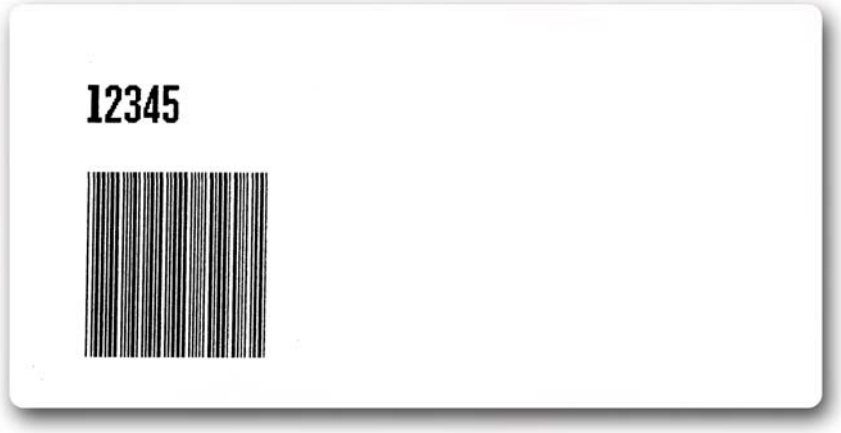


Figure 7-14. Label Format T7-13 - 60 X 120 mm

Figure 7-15. Label Format T8-14 - 60 X 120 mm

Figure 7-16. Label Format T9-15 - 60 X 120 mm

Figure 7-17. Label Format T10-16 - 60 X 120 mm

7.1.3 Character Sizes Available for Printing

The DC-300 has 10 different font sizes for label printing, designated as S1 through S5 and M1 through M5. The number of characters that will fit on a line will depend upon the label format you choose. Use Figure 7-18 and Table 7-2 below to determine what font size is best in order to fit your information onto your labels.

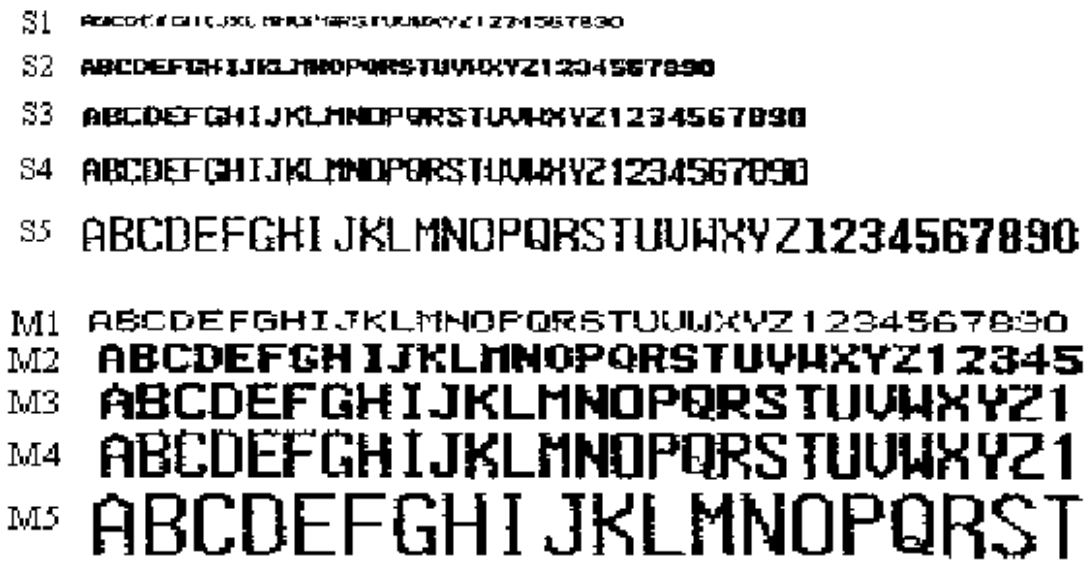


Figure 7-18. Font Size Examples

Label Format	Font Size	Number of Characters That Will Fit Per Line
T7-13, T8-14, T9-15, T10-16	S1	45 characters
T7-13, T8-14, T9-15, T10-16	S2	39 characters
T7-13, T8-14, T9-15, T10-16	S3	34 characters
T7-13, T8-14, T9-15, T10-16	S4	34 characters
T7-13, T8-14, T9-15, T10-16	S5	25 characters
T7-13, T8-14, T9-15, T10-16	M1	22 characters
T7-13, T8-14, T9-15, T10-16	M2	19 characters
T7-13, T8-14, T9-15, T10-16	M3	17 characters
T7-13, T8-14, T9-15, T10-16	M4	17 characters
T7-13, T8-14, T9-15, T10-16	M5	12 characters
A1 to T6-12	S1	70 characters
A1 to T6-12	S2	60 characters
A1 to T6-12	S3	53 characters
A1 to T6-12	S4	53 characters
A1 to T6-12	S5	38 characters
A1 to T6-12	M1	35 characters
A1 to T6-12	M2	30 characters
A1 to T6-12	M3	26 characters
A1 to T6-12	M4	26 characters
A1 to T6-12	M5	19 characters

Table 7-2. Line Length per Label Format

7.1.4 Label and Paper Roll Set-Up

This section explains how to load label and paper stock into the DC-300's built-in printer.

The printer can use receipt paper for report printing or label stock (see Section 7.1.1 for label types). When printing label stock, the labels can be set either to leave the labels on the paper backing or to peel the labels as they print. When peeling the labels, the take-up reel is used to roll up the used paper backing. When tearing off labels with the backing intact, the printer head senses the presence of a gap between labels and positions them by the tear-off bar.

1. Pull out the printer drawer on the right-hand side of the scale.

Figure 7-19. Opening Printer Drawer

2. If you haven't already done so, slide the take-up reel paper holder that came in the scale box over the take-up spindle.
3. Release the paper clamp on the thermal head block by pushing the paper clamp release lever toward the back of the scale.
4. There are two reels in the printer drawer, the roll holder and the take-up reel. Place the paper or label reel over the roll holder with the paper or labels feeding out to the left.
5. Take the end of the label or paper stock and thread it through the channel between the two guides. It is important that the stock stay between these guides because this is where the gap sensor is located.
6. Next bring the stock around the curved guide and in front of the first and second posts. Then feed the end through the thermal head block until it appears in front.
7. At this point you have three options:

   •If you are using receipt paper you can simply close the paper clamp by pressing the printer head assembly closed from the left until it snaps in place. Close the printer drawer and you are ready for report printing.

   •If you are using label stock and want to keep the labels on the backing, pull the end out until the gap between labels is at the tear-off bar and close the paper clamp by pressing the printer head assembly closed from the left until it snaps in place. Close the printer drawer and you are ready for label printing.

   •If you want the labels to partially peel off as they are printed, continue to the next step.
8. Remove enough labels from the backing to give yourself about 12 inches of just backing paper. Thread the end of the roll back across the dispenser roller and back into the printer drawer to the take-up reel. Pull up on the paper clamp on top of the take-up reel. Lock the end of the backing paper on the take up reel by replacing the paper clamp, sliding it down the grooves on either side of the reel. Close the main paper clamp by pressing the printer head assembly closed from the left until it snaps in place and close the printer drawer. The label roll can now be aligned by pressing the **FEED** key.

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Figure 7-20. Loading DC-300 Printer

7.1.5 Cleaning the Thermal Printer Head

Your DC-300 comes with a head cleaner kit for use in periodically cleaning the built-in printer's thermal head. This helps avoid streaking or blotching when printing labels and reports.

Slide one of the cleaning cloths onto the wedge end of the plastic stick. Remove the cap from the head cleaner fluid bottle and squeeze a few drops of the cleaning fluid onto the cloth. Wipe the heat element of the thermal head with the cloth in an up-and-down motion. Add more fluid to the cloth as needed. Sometimes a the residue will not come off easily even with the cleaning cloth. In these cases, try using the wedge end of the cleaning stick without a cloth on it to scrape it off. Use the cloth and fluid to clean it up after scraping.

When used up, the cleaning fluid can be replenished by refilling the bottle with 100% isopropyl alcohol. (Use of any other type of cleaning fluids may damage the print head.) There are also replacement cleaning cloths in the kit for use when the first one becomes dirty. After cleaning the thermal printer head, replace the cap on the cleaning fluid squeeze-bottle to prevent evaporation.

7.1.6 Checking or Rezeroing the Thermal Head Usage Counter

The DC-300 maintains a usage counter for the thermal head of the built in printer. It displays the usage in thousands (incrementing 1 for every 1000 print operations). The counter can be rezeroed after replacement of the print head in order to track usage on the new one.

1. From the stand-by screen press the **MODE** key until the display shows *SERVICE MODE*. The *Z* annunciator, indicating the service mode illuminates. While holding down the **REZERO** key, press **0823** to display the thermal head usage counter.

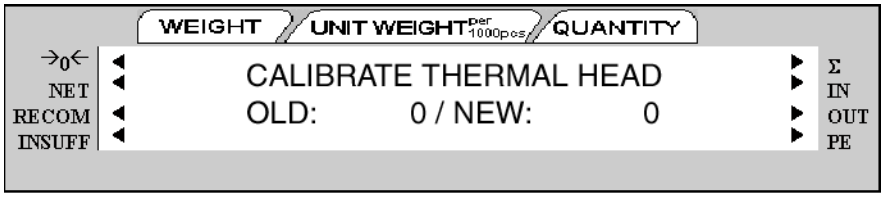
   In the example above, the counter is indicating that 47,000 print operations have taken place.

2. To rezero the counter, press the **CLEAR** key followed by the **CODE** key.
3. Press the **TARE** key to return to the service mode. Then press the **MODE** key twice to return to the stand-by screen.

7.1.7 Adjusting Printing Position

If the thermal print head gets misaligned vertically, the vertical position can be adjusted using the procedure below.

At the stand-by screen, hold down the **REZERO** key while entering **514** to enter the adjust printing position mode. The following will appear on the display:

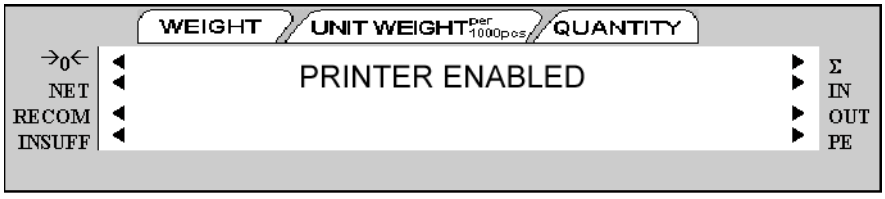


Print positions are measured in dots, where 1 vertical dot = 0.155mm. To adjust the print position upward, enter the number of dots from the numeric keypad. To adjust the print position downward, enter the number of dots from the numeric keypad the press the **–** (minus) key. Finally, press the **CODE** key to store the new value and exit to the stand-by screen. To exit the adjust printing position mode without making any changes, press the **TARE** key.

7.1.8 Turning On and Off the Internal Printer

The DC-300's built in printer can be enabled (turned on) or disabled (turned off) from the keyboard. At the stand-by screen, press the * **REPRINT** key while holding down the **REZERO** key. The following will appear on the display:

Pressing the * **REPRINT** key while holding down the **REZERO** key again will re-enable the built-in printer, showing the following on the display:



7.2 Programming Fields for Label Printing

7.2.1 Programming Factory Name Files

The DC-300 allows you to store up to 32 factory names in memory so that they can be associated with items in inventory and printed on labels for that item. The data can be up to three lines, with the number of lines and characters depending upon the size of the characters. The printing of a factory name on labels can be turned on and off using SPEC 55. Some label formats also do not include a print area for factory name. A default factory name can be set in SPEC 56 – DEFAULT PRINTING LABEL FACTORY NUMBER, and centering of the factory name on the labels is controlled by SPEC 57 – PRINTING OF FACTORY NAME FORMAT.

Once the factory names have been programmed into the scale's memory, you can change between them directly from the Weighing Mode without having to return here to the Programming Mode. For more information, see Section 5.9, "Changing Factory Names."

Printing the Factory Name Files

If this is the first time you are programming in a factory name, you can go directly to How to Program a Factory Name File below. If you want to check what factory names are already programmed into the scale and see what factory name files are still available, follow the instructions below to print a report of the factory name file. You can print a factory name report for a single name or for all the names that are programmed.

Before printing the report, please make sure that the DC-300 printer is loaded with receipt paper rather than labels (see Section 7.1.4 on setting up the printer).

1. From the Stand-by screen press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** key once to reach the *FACTORY PROGRAMMING* mode.
3. To print the report for a single factory name, enter the number for the factory name file you want to print and press the **TARE** key. To print the report for all factory names in memory, enter a **0** (zero) for the factory number and press the **TARE** key. To stop the printing at any time, press the **FEED** key. The report will show the date and time it was printed, the factory number, and the font size and number of characters on each line (see Section 7.1.3 for font sizes).

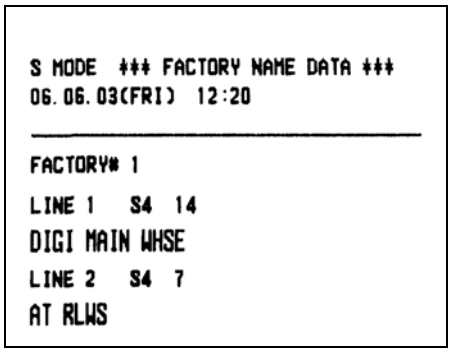


Figure 7-21. Factory Name Report

How to Program a Factory Name File

1. From the Stand-by screen press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** key once to reach the *FACTORY PROGRAMMING* mode.
3. Enter a new factory number between 1 and 32 and press the * **REPRINT** key. If you enter a factory number that has already been programmed into memory the screen will display the existing data for that factory number.
4. You will have a blinking cursor at which you can enter the first line of data for this factory name using the alphanumeric keyboard or numeric keypad. To the left of the cursor, the display will show the font size on the current label default format, the number of characters remaining that you can enter at this font size, and what line you are on. (e.g. S4/53/01 would indicate that there are 53 characters left that you can enter on line 1 of the name file at an S4 font size.) You may also use the ASCII codes shown in Section 12.6.1 on page 160. This line would often be where you would put a name for the factory (e.g. DIGI MAIN WHSE). Press the * **REPRINT** key to move to the next line.

5. Repeat Step 3 to enter data on lines 2 and 3 for this factory name, if desired, pressing the * **REPRINT** key to store the information. This can include other codes and data about this warehouse. It is not necessary to enter the address here since there is a separate file for that. (see Section 7.2.2). At any point that you are finished, you can save your data and exit by pressing the **CODE** key. To exit without saving the data, press the **PIECES** key followed by the **CLEAR** key.
6. To return to the stand-by screen, press the **MODE** key three times.

How to Delete a Factory Name File

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** key once to reach the *FACTORY PROGRAMMING* mode.
3. At the factory programming mode, enter the factory number you wish to delete and press the **–** (minus) key.
4. Press the **CLEAR** key to confirm deletion of this factory name. To exit without deleting the factory name, press the **TARE** key.
5. To return to the stand-by screen, press the **MODE** key three times.

7.2.2 Programming Address Files

Up to 16 addresses can be programmed into the DC-300 so that they can be assigned to an item code and printed on labels for that item. There can be as many as 8 programmable lines for each address, with the limit depending on the size of the print area and the character size you choose to print at for each label format. Each address must be defined as belonging to a certain label format (see Section 7.1.1 for label formats available). Since the standard label format does not have a print area for address, a free format label with an address print area must be used.

Printing the Address Files

If this is the first time you are programming in an address, you can go directly to How to Program an Address File below. If you want to check what addresses are already programmed into the scale and see what address files are still available, follow the instructions below to print a report of the address file. You can print an address report for a single address or for all the addresses that are programmed.

Before printing the report, please make sure that the DC-300 printer is loaded with receipt paper rather than labels (see Section 7.1.4 on setting up the printer).

1. Press **MODE** key until the display shows *ITEM PROGRAMMING MODE*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key four times to reach the address programming mode.
3. To print the report for a single address, enter the address number for the existing address file you want to print and press the **TARE** key. To print the report for all factory names in memory, enter a **0** (zero) for the factory number and press the **TARE** key. To stop the printing, press the **FEED** key.

   The report shows the address name at the top, the date and time the data was programmed, the address number, the label format, and the text size and number of characters of each line in the address.

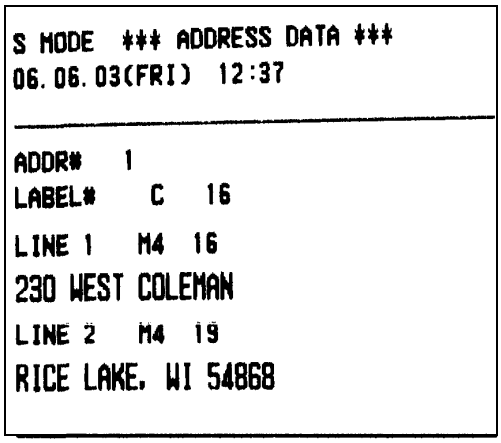


Figure 7-22. Address Report

4. To return to the Stand-by screen, press the **MODE** key three times.

How To Program an Address File

1. Press **MODE** key until the display shows *ITEM PROGRAMMING MODE*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key four times to reach the address programming mode.
3. Enter a new address number between 1 and 16 and press the * **REPRINT** key. If you enter an address number that has already been programmed into memory, the screen will display the existing address information for that address number.
4. The scale will now prompt you to select a label format for this address (see Section 7.1.2 for available label formats). Press the **<<** or **>>** keys to scroll through the available label formats. If you try to save an address on a label format which has no print area for an address, you will get a warning beep, the screen will display NO PRINT AREA briefly and then return to the option to choose a label format. Press the * **REPRINT** key to save the label format.
5. At the blinking cursor, enter the first line of data for this address using the alphanumeric keyboard or numeric keypad. To the left of the cursor the display will show the font size on the current label default format, the number of characters remaining that you can enter at this font size, and what line you are on. (e.g. S4/53/01 would indicate that there are 53 characters left that you can enter on line 1 of the name file at an S4 font size.) You may also use the ASCII codes shown in Table 12-17. Press the * **REPRINT** key to move to the next line.
6. Repeat Step 3 to enter data on lines 2 through 8 for this address, if desired, pressing the * **REPRINT** key to store each line after entering it. At any point that you are finished you can save your data and exit by pressing the **CODE** key. To exit without saving the data, press the **PIECES** key followed by the **CLEAR** key.
7. To return to the stand-by screen, press the **MODE** key three times.

How To Delete an Address File

1. Press **MODE** key until the display shows *ITEM PROGRAMMING MODE*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key four times to reach the address programming mode.
3. At the address programming mode, enter the address number you wish to delete and press the **–** (minus) key.
4. Press the **CLEAR** key to confirm deletion of this address. To exit without deleting the address, press the **TARE** key.
5. To return to the stand-by screen, press the **MODE** key three times.

7.2.3 Programming Text Files

Up to 20 pre-programmed text files can be stored in the DC-300. These are not associated with a specific item code. Instead, they allow you to print fixed data on labels such as “scale number” or “machine number”. Text files 1-10 can be used on item labels and text files 17-20 are specifically for use on total labels. Spec 71 allows you to set whether text files 11-16 are going to be used on item or total labels, with the default being on item labels. (see Section 3.1.1 on page 13 on how to change customer specifications). There can be up to 2 lines programmed for each text file, with the limit depending on the size of the print area and the character size you choose to print at for each label format. Each text field must be defined as belonging to a certain label format. (see Section 7.1.1 for Label Formats available). Since the standard label format does not have a print area for extra text fields, a free format label with a text print area programmed must be used (see Section 7.5 for instructions on how to set up Free Format labels).

Printing the Text Files

If this is the first time you are programming in a text file, you can go directly to How to Program a Text File below. If you want to check what texts are already programmed into the scale and see what text files are still available, follow the instructions below to print a report of the text files. You can print a text file report for a single text file or for all the texts that are programmed. To see what pre-programmed label formats incorporate text files, see the Label Format worksheets in Section 12.5.

Before printing the report, please make sure that the DC-300 printer is loaded with receipt paper rather than labels (see Section 7.1.4 on setting up the printer).

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key six times to reach the text programming mode.
3. To print the report for a single text file, enter the text number for the existing text file you want to print and press the **TARE** key. To print the report for all text files in memory, enter a **0** (zero) for the text number and press the **TARE** key. To stop the printing, press the **FEED** key.

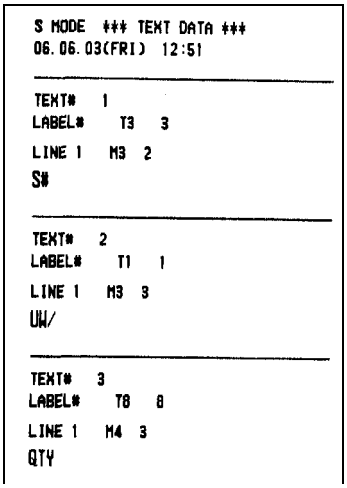


Figure 7-23. Text File Report

How to Program a Text File

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key six times to reach the text programming mode.
3. Enter a new text number between 1 and 20 and press the * **REPRINT** key. Remember that texts numbered 1-16 are available for Item labels, while 17-20 are available for total labels. Text files 11-16 can be moved between Item and Total labels by setting Spec 71. If you enter a text number that has already been programmed into memory the screen will display the existing data for that text number.
4. The scale will now prompt you to select a label format for this text (see Section 7.1.1 for available label formats). Press the **<<** or **>>** keys to scroll through the available label formats. If you choose a label format that does not have a print area for the text field you will get a warning beep and the display will briefly show the message *NO PRINT AREA* before returning to the text programming mode. Press the * **REPRINT** key to save the label format.
5. At the blinking cursor, enter the 1st line of data for this text using the alphanumeric keyboard or numeric keypad. To the left of the cursor the display will show the font size on the current label default format, the number of characters remaining that you can enter at this font size, and what line you are on. (e.g. S4/53/01 would indicate that there are 53 characters left that you can enter on line 1 of the name file at an S4 font size.) You may also use the ASCII codes shown in Table 12-17. Press the * **REPRINT** key to move to the next line.
6. If there is a second line of data for this text file you can enter it next. Press the * **REPRINT** key to store each line after entering it. If you do not want to enter a second line, exit and save the first line by pressing the **CODE** key. Also, after entering the second line you can save your data and exit by pressing the **CODE** key. To exit without saving the data, press the **PIECES** key followed by the **CLEAR** key.
7. To return to the stand-by screen, press the **MODE** key three times.

How to Delete a Text File

1. Press **MODE** key until the display shows *TEXT PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate
2. At the text programming mode, enter the text file number you wish to delete and press the **–** (minus) key.
3. Press the **CLEAR** key to confirm deletion of this text file. To exit without deleting the text file, press the **TARE** key.
4. To return to the stand-by screen, press the **MODE** key three times.

7.2.4 Programming Logo Files

The DC-300 allows you to store up to four logos in memory that can be utilized on free format or standard labels. Logos are stored as a pattern of dots on a grid of 128 horizontal dots by 64 vertical dots.

(Note that the standard label formats in the DC-300 have a print area for logos of only 37 dots by 30 dots so if you want to use your logo on standard labels you'll need to keep the size within those parameters.)

Preparing the Logo Design

In order to prepare to program the scale with a logo, you will first want to lay out the logo on a piece of graph paper.

1. On a piece of graph paper, outline an area either 128 horizontal by 64 vertical squares or 37 horizontal by 30 vertical squares.You may want to mark intervals of 5 rows or columns along the axes to make it easier to determine the starting and ending dots for programming.
2. Lay out your logo on the graph paper by filling in the necessary squares to make the design you want to store (see the example below of a DIGI logo in 37 x 30 size).

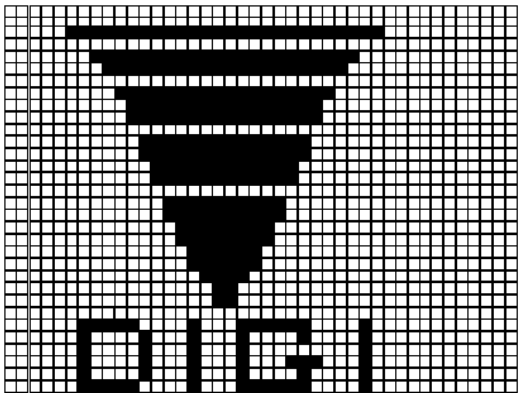


Figure 7-24. DIGI Logo Example

Logo File Programming Display and Keys

The scale display will show the logo file number, the X or horizontal dot position, the Y or vertical row number. Empty squares are shown by blanks while filled squares are indicated by zeroes as shown in the example below.

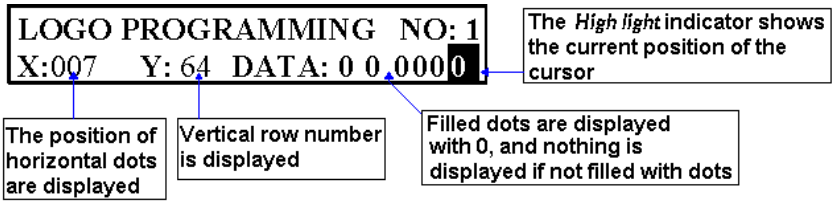

LOGO PROGRAMMING NO: 1
X:007 Y: 64 DATA: 0 0 0000
The High light indicator shows the current position of the cursor
The position of horizontal dots are displayed
Vertical row number is displayed
Filled dots are displayed with 0, and nothing is displayed if not filled with dots

Figure 7-25. Logo File Number

The rows are programmed beginning with the bottom row and moving upward. Programming begins with the leftmost square on each row and automatically moves to the next dot (Figure 7-26 below) until the end of the row is reached at which time the cursor will move automatically to the leftmost square on the next row up (Figure 7-26 below).

Figure 7-26. Cursor Movement When Programming Logos

You can also move manually around the grid using the keys shown below.

Key	Description
	Clear a dot
	Fill a dot
	Move the cursor to the left
	Move the cursor to the right
	Move the cursor up
	Move the cursor down
	Move up to the first dot in the next line
	Store the data

Table 7-3. Programming Keys

Printing the Logo Files

If this is the first time you are programming in a logo, you can go directly to How to Program a Logo File below. If you want to check what logos are already programmed into the scale and see what logo files are still available, follow the instructions below to print a report of the logo file. You can only print a logo report for a single file. There is no report available for all the logo files at once.

Note: *SPEC 58 - LOGO PRINTING sets which logo file will print on labels with space for a logo. See Section 3.0 Dealer Configuration Settings on how to change this specification if needed.*

Before printing the report, please make sure that the DC-300 printer is loaded with receipt paper rather than labels (see Section 7.1.4 on setting up the printer).

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key eight times to reach the *LOGO PROGRAMMING* mode.
3. To print a logo report, enter the logo number for the existing logo file you want to print and press the **TARE** key. To stop the printing, press the **FEED** key.

How to Program a Logo File

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key eight times to reach the *LOGO PROGRAMMING* mode.
3. Enter a new logo number between 1 and 4 and press the * **REPRINT** key. If you enter a logo number that has already been programmed into memory the screen will display the existing data for that logo.
4. At the *ENTER X (DOT):* prompt, enter the horizontal position out of 128 squares at which you want to start programming (ex.: entering a 7 will put you at the 7th square from the left). Press the * **REPRINT** key to move to the next prompt.
5. At the *ENTER Y (DOT):* prompt, enter the row out of 64 at which you want to start programming. (ex.: entering a 1 will put you at the bottom-most row.) Press the * **REPRINT** key to move to the next prompt.
6. Enter the first dot by entering a **1**. The cursor will automatically move to the next square to the right. You can enter ones for squares to be filled and zeros for squares to be left clear. If you reach the end of a row, the cursor will automatically move to the leftmost square of the next row up. At any time you can move to the next line up by pressing the * **REPRINT** key. Other navigation can be done by using the keys shown in Table 7-3 on page 80.
7. If at any time you want to go back to the entry screen where you can again specify an X and Y location to begin further programming, press the **–** (minus) key twice. Enter a horizontal position, followed by a vertical position. To keep either one without change, press the * **REPRINT** key. To save the new data, press the **CODE** key. To exit without saving the data, press the **PIECES** key followed by the **CLEAR** key.

How to Delete a Logo File

1. Press **MODE** key until the display shows *ITEM PROGRAMMING MODE*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key eight times to reach the *LOGO PROGRAMMING* mode.
3. Enter the logo number between 1 and 4 for the logo you will like to delete and press the **–** (minus) key.
4. Press the **CLEAR** key to delete the logo file or press **TARE** key to cancel the deletion.
5. To return to the stand-by screen, press the **MODE** key three times.

7.3 DC-300 Label Format Editor

An alternative to using the label formatting worksheets to design a free format label (see Section 7.5 and Section 12.5) is to use the DC-300 Label Format Editor that comes on the CD-ROM you received with your DC-300 scale. It allows you to define a label size, visually place the different item data on the label and then download the format to the scale.

If you have not yet configured your computer for Ethernet communication to the DC-300 scale, see Section 11.0.

7.3.1 Installing the DC-300 Label Format Editor Software

1. Place the DC-300 Service Tools CD-ROM in your computer's CD-ROM drive. If the installation screen doesn't launch within a few seconds, go to the Windows® Run menu. When the Run dialog box appears, press the browse button and select your computer's CD-ROM drive. Double-click on a the folder labeled "labelformat", then on the folder labeled "disk1". Finally, double-click on the item labeled "Setup". Click the **OK** button in the Run dialog box to launch the installation program.
2. The DC-300 label editor setup screen will appear. Please make sure that all other applications are closed, then click the **OK** button.

.

DC300 Label Editor Setup
Welcome to the DC300 Label Editor installation program.
Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any applications you may be running.
OK
Exit Setup

Figure 7-27. Label Editor Setup Screen

3. The installation program will now ask you to confirm what directory you want to install the program to. Click the **Begin Installation** button to accept the default directory *C:\LF* or click on the **Change Directory** button to specify a different directory. Once you have chosen a directory in which to install the program, click the **Begin Installation** button.

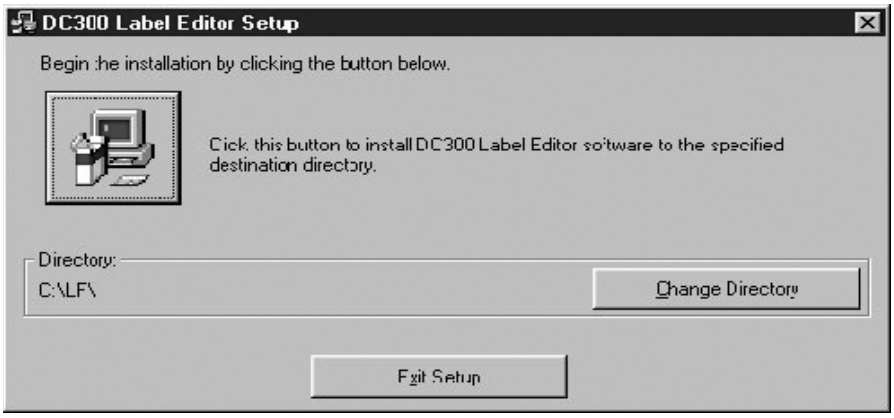

DC300 Label Editor Setup
Begin the installation by clicking the button below.
Click this button to install DC300 Label Editor software to the specified destination directory.
Directory:
C:\LF\
Change Directory
Exit Setup

Figure 7-28. Installation Editor Screen

4. The installation program will now install the necessary files on your computer. When complete, you will see the following message. Click the **OK** button to continue.

Figure 7-29. Setup Complete Screen

5. The installation now prompts you to restart Windows in order to complete the setup. You can choose to restart now or later, but installation will not be complete until Windows is restarted.

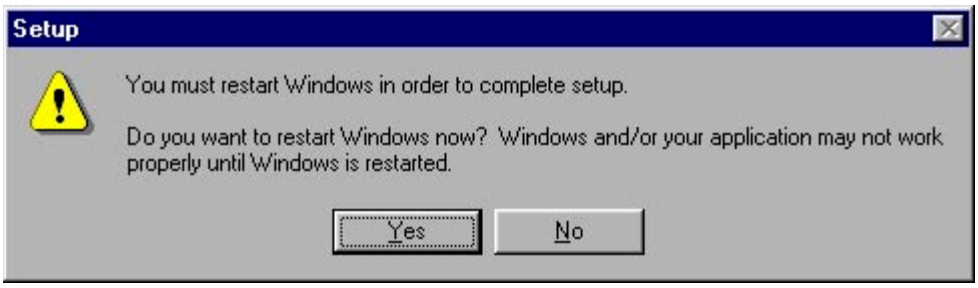

Setup
You must restart Windows in order to complete setup.
Do you want to restart Windows now? Windows and/or your application may not work properly until Windows is restarted.
Yes
No

Figure 7-30. Windows Restart Screen

6. Remove the DC-300 CD-ROM from your computer's CD-ROM drive and store it in a safe place for future use.

7.3.2 Formatting a Label With the DC-300 Label Format Editor Software

The instructions below apply to Version 1.37 build 1 (IR 1) of the DC-300 Label Editor software. To check what version of the DC-300 Label Editor you are currently running, open the program and choose the "About" menu from the main screen menu bar.

Opening the Program

1. In Windows, use the Start Menu, then the Program Menu to display the programs installed on your computer. Unless you specified otherwise, the program will appear in the Programs Menu as "*DC-300 Label Editor*". If you would like to put a shortcut to this program on your Windows desktop, drag and drop the program from the programs menu onto your desktop. Click on the program in the programs menu or double-click on the shortcut to launch the application.
2. The main editing screen appears below. A representation of the label you are formatting appears on the right, while the information on the data items appears on the left.

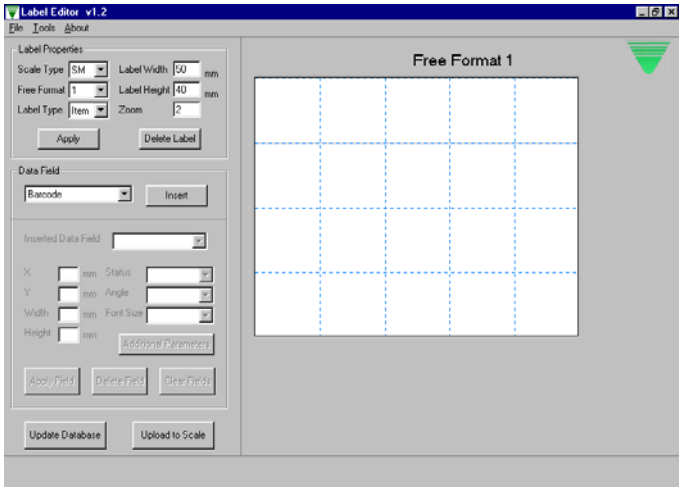


Figure 7-31. Free Format Label Screen

Copying an Existing Free Format

If you have previously designed a Free Format and saved it to the Label Editor's database by pressing the **Update Database** button, you can recall that format to use it as a basis for a new label design. After modifying it you can save it as a new Free Format number. If you have not previously designed and saved labels using the DC-300 Label Editor or do not want to use an existing design as your starting point, go to the "Inserting Fields" section below.

1. In the Label Properties section, set the scale type to DC.
2. Use the Free Format field to define which free format label number you want to design. The software and the scale can store up to 99 user-designed free formats. Once you enter a Free Format number, it will appear over top of the label layout on the right.
3. From the menu bar, choose the Tools menu and then the "Copy Format..." option under that menu.
4. A "Copy Free Format" dialog box will open, allowing you to choose which Free Format number you want to copy from.

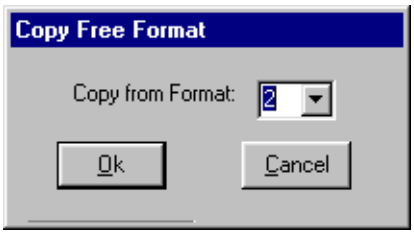


Figure 7-32. Copy Free Format Dialog Box

Enter the number of the Free Format you want to copy to the Free Format number you previously set in Step 1, making sure that this Free Format has an already programmed design.

5. Click the **OK** button to import this Free Format number's layout. You may now use the procedures outlined below for "Inserting Fields", "Modifying an Inserted Field", and "Deleting an Inserting Field" to modify this layout for your new Free Format number.

Inserting Fields

1. The first frame on the left allows you to define the label properties.
   - In the Scale Type list box choose "DC".
   - Use the Free Format field to define which free format label number you want to design. The software and the scale can store up to 99 user friendly free formats. Once you enter a free format number it will appear over top of the label layout on the right. If the software already has a design stored for the Free Format number, it will display the design in the layout window to the right where it can now be edited.
   - Next, choose whether the label you are designing will be an Item label or Total label.
   - You also set in this frame a label width from 32 to 56 mm and a label height of 19 to 111 mm. The representation of the label on the right will change to match the parameters you enter. On they layout screen you will see a grid of dashed blue lines to help you align items with each other.

Note: *The grid size and the color of the grid lines can be set by selecting the Setup option under the Tools menu. In the Setup dialog box choose the tab labeled "Others". The column width and row width can be set in millimeters as well as the grid color.*

   - The Zoom field allows you to zoom into the label format window for more precise viewing and placement of objects. 1 = 100% or actual size, 2 = zoom to 200%, etc.

2. The middle frame on the left lets you choose the data fields that you want to insert on the label. (For more information on the types and characteristics of the different data fields, see Table 7-5). The drop-down box shows all of the fields available to print on the label, including user-defined text fields. When you select a field from the drop-down list and click the **Insert** button, a representation of the field appears on the label in the shape and size of the data as it would appear on the label. The name of the field appears on the rectangle representing the field on the label.

Note: *The option to autosize the fields as you change their parameters can be turned on and off from the Tools menu. Select the Setup option under the Tools menu. In the Setup dialog box choose the tab labeled "Others". To have the program automatically change the size of the field on the label layout as you change the font size, check the Autosize Text Field check box. To turn this option off, remove the check mark in the Autosize Text Field check box.*

Field Type	Representation
Logo	
Quantity	
Weight	
Date	
Time	
Barcode	

Table 7-4. Field Type Labels

When the field is first inserted on the label, its representation will be colored green. The marker can be dragged with the mouse to any position on the label and remains moveable up until you select and insert the next field. At that point the previous marker changes from green to gray and its position is temporarily fixed on the label. In *Modifying an Inserted Field* below, we will show you how to move previously inserted fields.

3. When you click on the **Insert** button, the field you have chosen moves out of the drop-down list in the data field frame and appears in the inserted data field frame below. As you move a marker around the label by dragging it with the mouse, you will see that the X and Y coordinates shown for that field change.

   Before inserting the next field on the label, you can set the other printing characteristics of the inserted data field in the bottom frame. The print status (non-print, weigh print and all print) can be selected as well as the angle (0, 90, 180 or 270 degrees from horizontal). Note that when you change the angle parameter, the representation of the label rotates as well. If the field you are working on allows you to choose between the 10 different font sizes, the choices appear in the drop-down box. Otherwise, the font size remains grayed out. When you change the font size, the field representation changes size to show its new parameters, as long as the *Autosize Text Fields* option has been chosen. (For more information on how to set the *Autosize Text Fields* option, see the Note under Step 2 above.

4. If you have inserted one of the 20 user-defined text fields, the **Additional Parameters** button at the bottom will become available. Clicking on **Additional Parameters** button opens the dialog box shown in Figure 7-33.

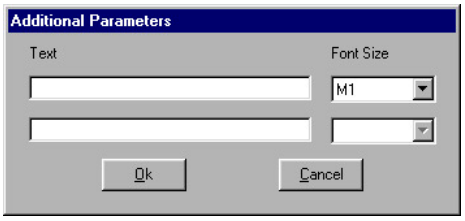


Figure 7-33. Additional Parameters Screen

In this dialog box you can enter up to two lines per text file and set the font size. The limit on the length of the text depends on the size of the print area and the character size you choose. After entering the text and font size, click on the **OK** button to return to the main label formatting screen.

Modifying an Inserted Field

Once you insert a field on the label layout screen, the previously inserted fields are temporarily fixed in the position you placed them. The field name moves from the data field drop-down box to the inserted field drop-down box.

1. To change the position or the parameters of any field that has already been inserted, select the field from the inserted field drop-down box or click on the field representation on the layout screen.
2. Once you select a previously inserted field, that field's representation on the label layout screen will turn green again and allow you to move it by dragging it with your mouse. The other parameters of this field (X Position, Y Position, status, width, height, status, angle and font size) will appear in the data entry boxes where they can be changed if needed.

Deleting an Inserted Field

Once you insert a field on the label layout screen, the previously inserted fields are temporarily fixed in the position you placed them. The field name moves from the data field drop-down box to the inserted field drop-down box.

1. To delete a field that has already been inserted, select the field from the inserted field drop-down box or by clicking on it.
2. Once you have selected a previously inserted field, that field's representation on the label layout screen will turn green. Make sure that you have selected the correct field, then click on the **Delete Field** button. You can also right-click on the field representation on the layout screen and then select "Delete". The field marker will disappear from the label layout screen.

7.3.3 Saving and Uploading a Label Format

The DC-300 Label Editor will allow you to save the label format you have designed to its own database on your PC and/or to download the format to the DC-300 scale. The free format design can be recalled on the scale or the PC by the free format label Number.

Saving to the DC-300 Label Editor Database

To save your label design to the DC-300's own database on the PC, simply click on the **Update Database** button in the bottom left frame.

Figure 7-34. Update Database Screen

Exporting a Label Design as a Text File

Label designs you store in the DC-300 Label Editor database can be saved and exported as a text (.txt) file which can be edited in any text editor.

1. Either design a new label using the label editor or call up an existing Free Format label design by choosing an existing Free Format number under "Label Properties" in the main screen.
2. Choose the Tools menu on the menu bar and then select the "Export DC datafile" option.
3. The program will bring up a "Save As" dialog box and automatically assigns the label design a file name with a.txt extension. The default directory for storing the label designs is "C:\ProgramFiles\LabelFormat". You may choose to change the directory and the file name or accept the defaults. Press the **Save** button to save the file.

Uploading to the DC-300 Scale

In order to upload your label design from the DC-300 label editor program to the DC-300 scale, you must first set the communications parameters between the PC and the scale.

1. On the DC-300 label editor menu bar click on the "Tools" menu, then on the "Setup" option.
2. In the Setup dialog box, under the Scale Setup tab, you can define the scale, protocol, and IP address of the scale you want to communicate with.

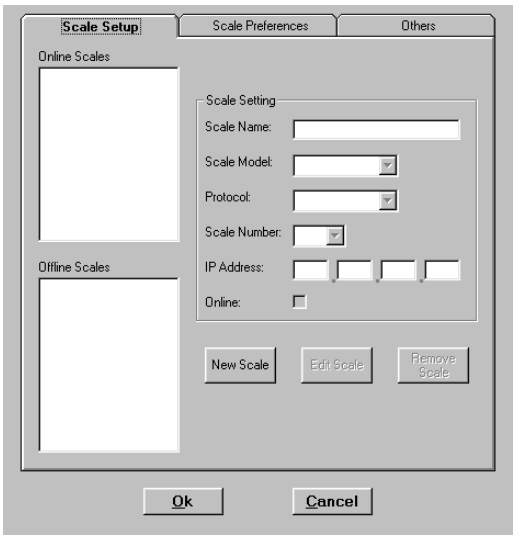


Figure 7-35. Scale Setup Settings

If your DC-300 scale already appears in the *Online Scales* list on the left, click on it to see the settings previously stored for the scale. You can then edit the scale settings if needed and press the **Update Changes** button.

If the DC-300 scale has not been previously set up, press the **New Scale** button.

3. To add your DC-300 to the list of Online Scales;

   • Enter a scale name by which this scale will be identified in the list of online scales.

   • In the scale model list box, choose *DC-300*.

   • Set the drop-down list box for protocol to FTP. (The program does not currently work with the RS-232 interface).

   • If you have more than one DC-300 connected to your network, set the scale number you want to communicate with by this profile.

Note: *The Scale Number is set in SPEC 42 – SET SCALE NUMBER. See Section 3.0 Dealer Configuration Settings on how to change this specification if needed.*

   • Set the IP address for the scale as 192.168.0.100

   • If this scale will be on-line in your network, check the *On-line* checkbox.

   • Click the **Add Scale** button to add the scale to your On-line scales list on the left. Then click the **OK**

button to exit the scale setup dialog box.

4. It is not necessary to use the Scale Preferences tab in the Setup dialog box since the label editor does not use the RS-232 interface to communicate to the DC-300.
5. Press the **Upload to Scale** button to upload the free format label number shown in the label editor program to the scale.

Figure 7-36. Upload To Scale Screen

6. If you get the message "*Upload Free Format: Error on Scale 1",* recheck the scale setup settings from Step 3. If necessary, check SPEC 42 to make sure that the scale number matches what the program is searching for.

7.4 Manual Printing of Labels

You can print a label or receipt for a single transaction in Operation Mode. The format that will be printed is determined by the Label Format number that was stored with the Item Code during Item Code entry (see Section 6.1.2).

Notes:

• Before proceeding, make sure that SPEC43 SELECT RECEIPT PRINTING OR LABEL PRINTING is set to the type of stock you want to print on and that the built-in printer is loaded with the correct stock.

• SPEC 50 SELECTION OF LABEL AND RECEIPT PRINTING OPERATION also determines whether printing can be done during all operations or just in or out operations. The default is "0: ALL OPERATION".

• If printing labels in peel-off mode, the message "PLEASE PEEL LABEL" will appear after you press the *** REPRINT** *key if the previous label remains at the dispenser. You can print another label without removing the previous label by setting SPEC 48 PEEL SENSOR FUNCTION to "0: Disable".*

7.4.1 Issuing an Item Label or Receipt

1. At the stand-by screen, enter an item code and press the **CODE** key to recall the item's information from the scale's memory.
2. Place the product on the scale platter.
3. Press the *** REPRINT** key to issue a label or receipt for this individual item.
4. Remove the product from the platter and enter another item code or press the **CLEAR** key to return to the stand-by screen.

7.4.2 Issuing a Total Label or Receipt

Note: *SPEC34 PRINT WHEN PRESS +/– KEY determines whether the scale prints during accumulation whenever the* **+** *(Plus) or* **–** *(Minus) keys are pressed. The default is "0: Disable", meaning that you must press the* *** REPRINT** *key to print.*

1. At the stand-by screen, enter an item code and press the **CODE** key to recall the item's information from the scale's memory.
2. Place the product on the scale platter.
3. Press the **+** (Plus) key to enter the total mode. The memory annunciator Σ will illuminate.
4. Press the *** REPRINT** key to print a total label or receipt.
5. Remove the product from the platter and enter another item code or press the **CLEAR** key to return to the stand-by screen.

7.5 Free Format Label Programming

7.5.1 General Label Parameters

Labels with widths of 32 mm to 56 mm and lengths of 19 mm to 111 mm can be programmed. Up to 99 Free Formats can be defined and stored in memory, with one Item Label and one Total Label under each Free Format number.

7.5.2 Print Area, Print Position and Print Angles

A 1 mm margin from the edges of the label should be left unprogrammed. Also, the bottom 10 mm of the label is reserved for fixed data (such as Factory Name, Address and Logo) that do not change as the item data changes.

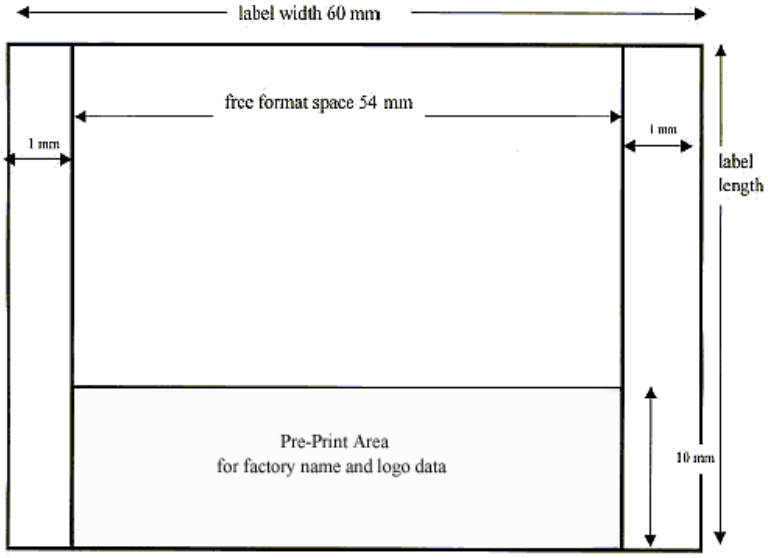


Figure 7-37. Free Format Label Print Areas Available

The print position of each item on the label is determined by setting the X and Y coordinates of the base position of the item from a “0” point on the label. The X and Y values can be defined in two types of units: millimeters and dots. One horizontal dot is equal to 0.135 mm while one vertical dot is equal to 0.155 mm.

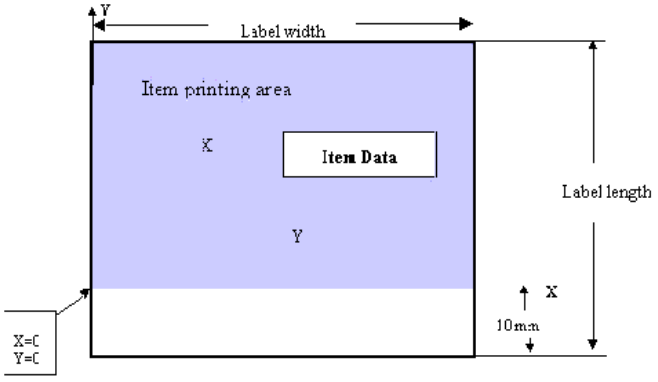


Figure 7-38. Free Format Label Print Positions

The print angle of some items can be rotated in 90 degree increments. Depending upon the rotation, the X, Y starting point for setting the position changes. Please see the examples below.

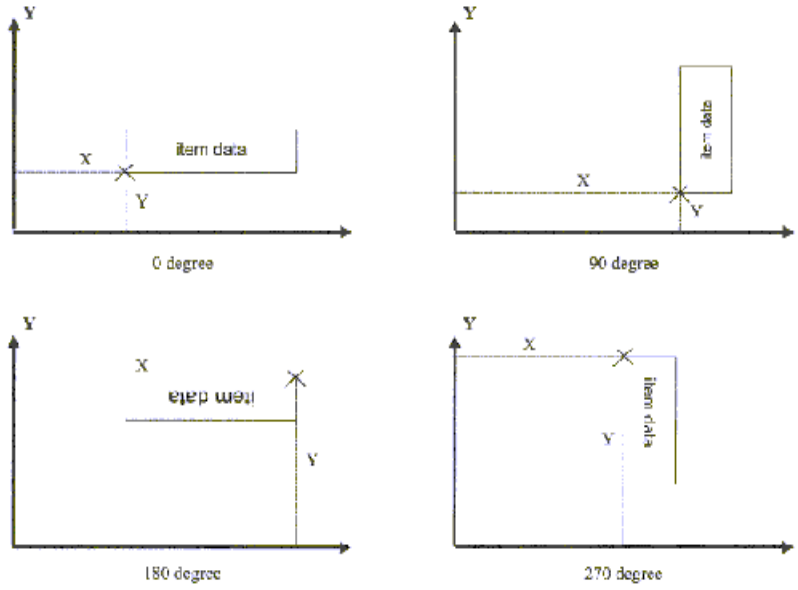


Figure 7-39. Starting Positions for Print Angles

7.5.3 Kinds of Data That Can Be Included on a Free Format Label

There are five kinds of data that can be included in a label format.

Kind of Data	Description
Numeric Data	Variable numeric data about an item being weighed, such as Gross Weight or Unit Weight or Quantity
Fixed Data	Titles such as Location Title or Part Name Title that do not change as the Item changes
Alphanumeric Data	Item fields such as Part Name and Address that can mix numeric and alphabetic characters
Barcode Data	The four items which can be represented by bar codes: ID CODE, UNIT WEIGHT, TARE WEIGHT and QUANTITY
Frames	Each free label format can have up to two frames

Table 7-5. Data Types for Label Formatting

7.5.4 Item and Total Labels

There are two basic types of labels that can be programmed: the Item Label and the Total Label. The Item Label can be programmed with up to 44 different fields and 4 barcodes that give information about an inventory item. Up to 12 fields and one barcode can be programmed on Total Labels that are used to show accumulation data.

Item Label Format

Below are the fields and barcodes that can be printed on an Item Label.

Item No.	Item Data	Notes
1	ID CODE	
2	GROSS WEIGHT	
3	UNIT WEIGHT	
4	NET WEIGHT	
5	QUANTITY	
6	PACK DATE	
7	PACK TIME	
8	PART NUMBER	
9	QUANTITY UNIT	Shows what units the QUANTITY field (Item No. 5) is in (e.g. rolls, pieces, etc.)
10	PART NAME	
11	LOT NUMBER	
12-1	ID CODE BARCODE	The barcode representation of Item# 1
12-2	UNIT WEIGHT BARCODE	The barcode representation of Item #3
12-3	TARE WEIGHT BARCODE	The barcode representation of Item#12-2
12-4	QUANTITY BARCODE	The barcode representation of Item#5
13	FACTORY	
14	INVENTORY	
15	THRESHOLD	
16	LOGO	
17	TARE WEIGHT	
18	SCALE NUMBER	Shows which of the platforms the transaction was performed on: A, B, C or D
19	ADDRESS	
20	LOCATION	
21	SEQUENCE NUMBER	Allows you to add a sequence number to each label which automatically increments each time a label is printed
22	STATUS	
23	FRAME 1	
24	FRAME 2	
25-40	TEXT 1 through 16	User-defined text fields.
41	SEQUENCE TITLE	Sets a fixed title which appears by the Sequence Number (Item #21)
42	ID CODE TITLE	Sets a fixed title which appears by the ID Code (Item#1)
43	LOCATION TITLE	Sets a fixed title which appears by the Location field (Item#20)
44	PART NAME TITLE	Sets a fixed title which appears by the Part Name field (Item#10)
45	PART NUMBER TITLE	Sets a fixed title which appears by the Part Number field (Item#8)
46	LOT NUMBER TITLE	Sets a fixed title which appears by the Lot Number field (Item#11)
47	NET WEIGHT TITLE	Sets a fixed title which appears by the Net Weight (Item#4)
48	GROSS WEIGHT TITLE	Sets a fixed title which appears by the Gross Weight (Item#2)
49	TARE TITLE	Sets a fixed title which appears by the Tare Weight (Item#17)
50	TEST PRINT	Allows you to test print your Free Format design to check it

Table 7-6. Data Fields for Item Labels

Total Label Format

Item No.	Item Data	Notes
1	TOTAL QUANTITY	
2	TOTAL QUANTITY UNIT	Shows what units the TOTAL QUANTITY field (Item#1) is in (e.g. rolls, pieces, etc.)
3	UNIT WEIGHT	
4	PACK DATE	
5	PACK TIME	
6	TOTAL TITLE	Sets a fixed title which appears by the TOTAL QUANTITY field (Item #1)
7	TOTAL BARCODE	The barcode representation of the TOTAL QUANTITY field (Item#1)
8	TEXT 17	User-defined text field.
9	TEXT 18	User-defined text field.
10	TEXT 19	User-defined text field.
11	TEXT 20	User-defined text field.
12	SEQUENCE NUMBER	Allows you to add a sequence number to each label which automatically increments each time a label is printed
13	SEQUENCE TITLE	Sets a fixed title which appears by the SEQUENCE NUMBER field (Item#12)
14	ACCUMULATION	
15	TEST PRINT	Allows you to test print your Free Format design to check it

Table 7-7. Data Fields for Total Labels

Programming a Free Format Label

Before starting this operation, you will need to know the following information:

- whether you are going to use an existing label format as a base for your new label or program a custom format from scratch.If you are using an existing label format as the template, you will need to know the format number of the preprogrammed label. (see Section 7.1.2 for existing label formats);
- the height and width of your label in mm;
- the X and Y coordinates, angle, and character size you want for each data field you are going to place on your label. You can alter an existing format's coordinates using the worksheets in Section 12.5.
- whether you are going to format an Item label or Total label.

Note: *At most steps you can save the data entered to that point and exit the programming mode by pressing the* **CODE** *key. You can exit without saving by pressing the* **PIECES** *key, followed by the* **CLEAR** *key.*

For label design templates and worksheets, please see Section 12.5 or download them from our web site at www.DigiScales.com.

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate.
2. Press the **+** (plus) or **–** (minus) keys to scroll through the programming options until you see the *PROGRAM FREE FORMAT* screen. The display will prompt you to enter a Free Format number that will identify this format. There are 99 free format slots available, so enter a number from 1 to 99 using the numeric keypad and press the *** REPRINT** key. (If you enter a format number that is already programmed, the screen will display at each step the previously programmed data which you can then modify or leave the same.)
3. The display will now ask you if you want to copy one of the existing label formats as a starting point for your new format. Later in this procedure you will be able to change the print fields and positions from the format you copy or you can choose to leave them the same. Press the **CLEAR** key to copy an existing format or the **TARE** key to start a new format from scratch. If you press the **CLEAR** key, go to Step 4. If you press the **TARE** key, skip Step 4 and go to Step 5.

4. If you pressed the **CLEAR** key, the next screen will ask you which existing format you want to copy (including previously defined Free Formats). Use the **<<** and **>>** keys to scroll through the available) options. When the format you want to copy is displayed, press the *** REPRINT** key.
5. Accept the Label Width shown or enter a new Label Width (between 32 mm and 56 mm) and press the *** REPRINT** key.
6. Accept the Label Height shown or enter a new Label Height (between 19 and 120 mm) and press the *** REPRINT** key.
7. At the next screen, enter a 0 to enter Item Label programming or a 1 to program a Total Label.
8. At this point you have three choices: a) you can store the formatting information you have entered so far and exit the Free Format programming mode by pressing the **CODE** key, or b) you can exit the Free Format programming mode without saving the formatting data by pressing the **PIECES** key, followed by the **CLEAR** key, or c) you can continue on to program the print areas for the format and label type you are working on.

7.5.5 Programming Data Layout for Free Format Labels

This section will explain how to program the layout of the data on free format Item and Total labels. Some layout parameters (X Position, Y Position) are common to all types of data (Numeric, Fixed, Alphanumeric, Barcode and Frames). Other parameters (Title Width, Thickness) only apply to certain data types. Once you select the field that you want to program, you will be prompted only for the parameters that relate to that data type. Programming frames will be described separately after the other data types because of the different parameters it uses.

Formatting Numeric, Fixed, Alphanumeric and Barcode Data

1. You can select the item data you want to format either by scrolling through the fields using the **+** and **–** keys or by entering the number for the item data from Table 7-6 or Table 7-7 and pressing the **+** key. Once the item data you want to program is on the screen press the *** REPRINT** key.

   For Item # 12, Barcode, after you press the *** REPRINT** key you will need to select which barcode's layout you want to program (ID Code, Unit Weight, Tare Weight, or Quantity). Select the barcode by using the **+** or **–** keys, then press the *** REPRINT** key.
2. Enter the X Position of this item on your label format from the numeric keypad and press the *** REPRINT** key. If you prefer to define your label coordinates by dots rather than mm, use the **>>** key to change the measurement units to dots. (1 dot = 0.125 mm.) If you have already entered the X Position in mm, the scale will convert this position to the equivalent dots. This change can be made when programming any item that requires a position measurement.
3. Enter the Y Position of this item on your label format from the numeric keypad and press the *** REPRINT** key. If you selected dots as your units of measurement in Step 3, it will remain dots here.
4. To keep the Angle of the data at 0 simply press the *** REPRINT** key. To change the angle to 90, 180 or 270 degrees, use the **<<** and **>>** keys to make your selection, then press the *** REPRINT** key.
5. Enter the TTL Width (Title Width) for this data item from the numeric keypad and press the *** REPRINT** key.
6. Enter the TTL Height (Title Height) for this data item from the numeric keypad and press the *** REPRINT** key.
7. Using the **<<** and **>>** keys, choose when you want this data to print: 0 for No Print, 1 for Weight Print and 2 for All Print. Press the *** REPRINT** key. (Note that some fields, such as ID Code, are fixed and can't be changed.)
8. If the data item you are programming allows you to program its Character Size, you will be prompted to accept or change it. (For available character sizes, see Figure 7-18). Use the **<<** and **>>** keys to scroll through the available options. Press the *** REPRINT** key.
9. You will now be returned to the initial screen for the field you were programming, showing its name. (When programming Item 12 - Barcode, you must press the **TARE** key to return to this point.) To move to programming the next field on the label, press the **+** key. To move to a specific data item, enter its number from Table 7-6 or Table 7-7 using the numeric keypad and press the **+** key. To save the formatting you have entered and exit the programming mode, press the **CODE** key. To exit without saving your data, press the **PIECES** key, followed by the **CODE** key.

Formatting Frame Data

This section will explain how to program the position of a frame on a label. The X and Y Base Position, X and Y Diagonal length, print Status and line Thickness can be user-programmed. Up to two frames can be programmed on a Free Format Label.

1. Use the **+** or **-** keys to move to Item No. 23-Frame or 24-Frame by entering 23 or 24 from the numeric keypad and pressing the **+** (plus) key. Then press the * **REPRINT** key.
2. Enter the X-Axis Base position of the frame on your label format from the numeric keypad and press the * **REPRINT** key. If you prefer to define your label coordinates by dots rather than mm, use the **>>** key to change the measurement units to dots. (1 dot = 0.125 mm.) If you have already entered the X-Axis Base position in mm, the scale will convert this position to the equivalent dots. This change can be made when programming any item that requires a position measurement.
3. Enter the Y-Axis Base position of the frame on your label format from the numeric keypad and press the * **REPRINT** key. If you selected dots as your units of measurement in Step 3, it will remain dots here.
4. Enter the X Diagonal length of the frame on your label format from the numeric keypad and press the * **REPRINT** key. If you selected dots as your units of measurement in Step 3, it will remain dots here.
5. Enter the Y Diagonal length of the frame on your label format from the numeric keypad and press the * **REPRINT** key. If you selected dots as your units of measurement in Step 3, it will remain dots here.
6. Choose when you want the frame to print by programming the print Status: 0 for No Print, 1 for Weight Print and 2 for All Print. Press the * **REPRINT** key.
7. Choose the Thickness or line weight of the frame by entering a value in either mm or dots (1 dot = 0.125mm). Use the **<<** or **>>** keys to toggle between mm and dots as the unit of measurement. Press the * **REPRINT** key.
8. You will now be returned to the initial Item Programming screen. Press the **CODE** key to save the formatting you have entered and exit the programming mode.

7.5.6 Checking Your Free Format Programming Layout

There are two ways you can check the layout you have programmed for a Free Format: test print a label or print the file as a report.

Test Printing the Label Layout

Note: *This procedure assumes that you are not already in the Free Format programming mode but want to test print the layout starting from the Stand-by Screen. If you are already in the Free Format programming mode, go directly to Step 7 below.*

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate.
2. Press the **+** (plus) or **–** (minus) keys to scroll through the programming options until you see the *PROGRAM FREE FORMAT* screen. Enter the Free Format number of the label you want to test print and press the * **REPRINT** key.
3. When prompted *COPY EXISTING FORMAT?*, press the **TARE** key to answer (NO). The data you have previously programmed for this Free Format will be displayed. In the steps below, you will move confirm the label size without changing it until you get to the Item Label programming mode.
4. At *LABEL WIDTH* press the * **REPRINT** key for no change.
5. At *LABEL HEIGHT* press the * **REPRINT** key for no change.
6. At *SELECT LABEL TYPE*, enter **0** to enter Item Label formatting.
7. To move to the Test Print mode you can use the **<<** and **>>** keys to move to Item No. 50 Test Print or enter 50 from the numeric keypad and press the **+** (plus) key. Then press the * **REPRINT** key to enter the Test Print mode.
8. Press the * **REPRINT** key to leave the print Status as "2 – All Print" and print a sample label. Check the print position and size of each field. If satisfied with the layout, press the **CODE** key to save the layout. If necessary, adjust the position or size and print a new sample label. Once the layout is set, press the **CODE** key to save the layout and return to the Free Format programming mode.
9. Press the **MODE** key three times to return to the Stand-by Screen.

Print the Free Format File

You can print as a report the parameters of a Free Format you have programmed. There is no report showing all of the Free Formats; only one Free Format can be printed at a time. Before following this procedure, make sure that the DC-300's printer is loaded with receipt paper rather than label stock (see Section 7.1.4) and that SPEC 43 - SELECT RECEIPT OR LABEL PAPER PRINTING is set to "0: RECEIPT PAPER" (see Section 3.1.1).

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate.
2. Press the **+** (plus) or **–** (minus) keys to scroll through the programming options until you see the *PROGRAM FREE FORMAT* screen. The display will prompt you to enter a Free Format number that will identify this format. Using the numeric keypad, enter the number for the Free Format you want to print a report for.
3. Press the **TARE** key to print out the report for this particular Free Format. To cancel printing once it starts, press the **FEED** key.
4. Once the report has printed, the scale will return to the Free Format programming mode.
5. Press the **MODE** key three times to return to the Stand-by Screen.

7.5.7 Example of Free Format Programming by Modifying an Existing Format

Many times it is easier to modify an existing label format slightly to customize a label to your needs than to design a Free Format label from scratch. Below is an example you can use to learn and practice changing an existing format. Section 12.5 on page 141 has the layouts for the formats that come pre-programmed into the DC-300 so you can use them as your starting point. It also has worksheets you can copy and use to make the data entry for label formatting easier.

In this example, we will copy and then modify the A1 Label format, using a worksheet that shows the existing data field positions and any changes we want to make. We are going to change the following items in the layout of the label:

1. Add a barcode for the item's ID Code,
2. Add a title to the ID Code,
3. Move the ID Code's position to accommodate the barcode and title,
4. Add a title for the Part Number, and
5. Delete the Status field.

Data Item #	Data Item	X Position (mm)		Y Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
		A1	new	A1	new	A1	new	A1	new	A1	new	A1	new	A1	new
1	ID Code	0	14	33		0		56		7		2		M5	
2	Gross Weight	14		15		0						1		M3	
3	Unit Weight	41		11		0						1		M3	
4	Net Weight	14		11		0						1		M3	
5	Quantity	28		0		0						2		M5	
6	Pack Date	0		0		0						2		S5	
7	Pack Time	13		0		0						2		M2	
8	Part Number	0	14	21	19	0		56		5		2		M2	
9	Quantity Unit	51		0		0						2		M1	
10	Part Name	0		27		0		56		5		0		M2	
11	Lot Number	0		15		0		56		5		0		M2	
12-1	Barcode (ID Code)	0	31	0	33	0				0	7	0	2		
13	Factory Name	0		46		0		56		9		2			
14	Logo	3	1	24		0		5		4		0			
17	Tare Weight	41		15		0						1		M3	
20	Location	0		0		0		56		5		0		M2	
22	Status	0		8	0	0						2	0	M2	
42	Title ID	0		0	35	0						0	2	S5	M3
45	Title Part No.	0		0	21	0						0	2	S5	M3

Table 7-8. Worksheet: Modifying A1 Label Format to Make a New Free Format

1. Press **MODE** until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate.
2. Press the **+** (plus) or **–** (minus) keys to scroll through the programming options until you see the *PROGRAM FREE FORMAT* screen. The display will prompt you to enter a Free Format number that will identify this format when it is saved. There are 99 free format slots available and for the purposes of this example we will use number 8. Using the numeric keypad, enter 8 to program Free Format number 8 and press the * **REPRINT** key. (If you enter a format number that is already programmed, the screen will display at each step the previously programmed data that you can modify or leave the same.)
3. Press the **CLEAR** key to copy an existing format. Use the **<<** and **>>** keys to scroll through the available format options until you see A1, then press the * **REPRINT** key.
4. At Label Width press the * **REPRINT** key for no change.
5. At Label Height press the * **REPRINT** key for no change.
6. At Select Label Type, enter 0 to enter Item Label formatting. Then press the * **REPRINT** key to enter the ID Code programming mode.
7. At the X Position, enter 14 to move the ID Code 14 mm in from the 0 position at the edge of the label, giving us room for the ID Code title later. Press the * **REPRINT** key to save the change.
8. Press the * **REPRINT** key to accept the Y Position with no change since we want to leave the ID Code on the same line it is on now.
9. Press the * **REPRINT** key to accept the Angle of 0 Degrees with no change.
10. Press the * **REPRINT** key to accept the Title Width as 56 mm with no change.
11. Press the * **REPRINT** key to leave the Title Height at 7 at 4 mm with no change.
12. Press the * **REPRINT** key to leave the print Status as “2 – All Print”.

13. Press the * **REPRINT** key to accept the Character Size as M5 with no change. This will bring you to the ID Code programming mode opening screen.
14. To move to the item number for Part Number (the next item we want to change), enter 8 from the numeric keypad and press the **+** (plus) key (see Table 7-6 for item numbers). Then press the * **REPRINT** key to enter the Part Number programming mode.
15. Enter 14 to change the X Position from 0 mm to 14 mm, then press the * **REPRINT** key.
16. Enter 19 to change the Y Position from 21 mm to 19 mm, then press the * **REPRINT** key.
17. Press the * **REPRINT** key to leave the Angle of 0 Degrees unchanged.
18. Press the * **REPRINT** key to accept the Title Width as 56 mm with no change.
19. Press the * **REPRINT** key to accept the Title Height as 5 mm with no change.
20. Press the * **REPRINT** key to accept Print Status as "2-All Print" with no change.
21. Press the * **REPRINT** key to accept the Character Size as M2 with no change. This will bring you back to the Part Number programming mode opening screen.
22. To move to the item number for Barcode, enter 12 from the numeric keypad and press the **+** (plus) key. (see Table 7-6 for item numbers) Then press the * **REPRINT** key to enter the Barcode programming mode.
23. In the Barcode programming mode, you have to select which barcode (ID Code, Unit Weight, Tare Weight or Quantity) you want to program using the **<<** and **>>** keys. Since the ID Code Barcode is the first selection to appear, you can simply press the * **REPRINT** key to accept that selection.
24. Enter 31 to change the X Position from 0 mm to 31 mm, then press the * **REPRINT** key.
25. Enter 33 to change the Y Position from 0 mm to 33 mm, then press the * **REPRINT** key.
26. Press the * **REPRINT** key to leave the Angle of 0 Degrees unchanged.
27. Enter 7 to change the Height from 0 mm to 7 mm, then press the * **REPRINT** key.
28. Enter 2 to change the Print Status from "0-No Print" to "2-All Print" and press the * **REPRINT** key. This will bring you back to the ID Code Barcode programming mode opening screen. To exit the Barcode Programming section and return to the list of items that can be programmed, press the **TARE** key.
29. To move to the item number for Status, enter 22 from the numeric keypad and press the **+** (plus) key. (see Table 7-6 for item numbers) Then press the * **REPRINT** key to enter the Status programming mode.
30. Press the * **REPRINT** key to accept the X Position as 0, then press the * **REPRINT** key.
31. Enter 0 to change the Y Position from 8 mm to 0 mm, then press the * **REPRINT** key.
32. Press the * **REPRINT** key to leave the Angle of 0 degrees unchanged.
33. Enter a 0 to change the Print Status from "2-All Print" to "0-No Print" and press the * **REPRINT** key. This will keep this field from printing on the label.
34. Press the * **REPRINT** key to leave the Character Size of M2 unchanged. This will bring you back to the Status programming mode opening screen.
35. To move to the item number for Title ID, enter 42 from the numeric keypad and press the **+** (plus) key. (see Table 7-6 for item numbers) Then press the * **REPRINT** key to enter the Title ID programming mode.
36. Press the * **REPRINT** key to accept 0 mm as the X Position, then press the * **REPRINT** key.
37. Enter 35 to change the Y Position from 0 mm to 35 mm, then press the * **REPRINT** key.
38. Press the * **REPRINT** key to leave the Angle of 0 Degrees unchanged.
39. Enter 2 to change the Print Status from "0-No Print" to "2-All Print", then press the * **REPRINT** key.
40. Use the **<<** and **>>** keys to change the Character Size from S5 to M3, then press the * **REPRINT** key.
41. Since Title Part No. is item #45 and we are currently at item #42, you can move to it simply by pressing the **+** key three times. Then press the * **REPRINT** key to enter the Title Part No. programming mode.
42. Press the * **REPRINT** key to accept 0 mm as the X Position, then press the * **REPRINT** key.
43. Enter 21 to change the Y Position from 0 mm to 21 mm, then press the * **REPRINT** key.
44. Press the * **REPRINT** key to leave the Angle of 0 Degrees unchanged.
45. Enter 2 to change the Print Status from "0-No Print" to "2-All Print", then press the * **REPRINT** key.
46. Use the **<<** and **>>** keys to change the Character Size from S5 to M3, then press the * **REPRINT** key. This

will bring you back to the Title Part No. programming mode opening screen.

47. Press the **+** key once to move to the next item, temporarily saving the data programmed so far.
48. To do a Test Print of your label, enter 50 from the numeric keypad and press the **+** (plus) key. Then press the * **REPRINT** key to enter the Test Print mode.
49. Press the * **REPRINT** key to leave the print Status as "2 – All Print" and print a sample label. Check the print position and size of each field. If satisfied with the layout, press the **CODE** key to save the changes we've made to the A1 label format in order to define a new Free Format Label #8. If necessary, make adjustments to the X and Y position and size of the data items printing and print a new sample label. Once the layout is set, press the **CODE** key to save the layout and return to the Free Format programming mode.
50. Press the **MODE** key three times to return to the Stand-by Screen.

To see the results of the newly formatted Free Format Label #8, you can also press **SHIFT UP + L** to change the active label format. Then call up an item code from memory by entering the item code and pressing the **CODE** key. Finally, press the * **REPRINT** key to print a label.

7.5.8 Delete a Free Format File

Follow the steps below in order to delete a Free Format you have programmed. Note that you cannot delete a Free Format that has been associated with an Item Code in memory. Before deleting a format used by an existing Item Code you will need to assign that Item Code another label format (See Section 6.1.2).

1. Press the mode key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate.
2. Enter the number of the Free Format that you wish to delete and press the **–** (minus) key to enter the deletion mode.
3. Press the **CLEAR** key to confirm the deletion or press the **TARE** key to cancel the deletion. You will be returned to the Free Format Programming mode screen.

7.6 Changing Label Formats

The DC-300 has four different ways to determine which label format will print.

- change the label type programmed with an individual ID Code: (see Section 6.1.2).

  As long as it is not set to the DEFAULT Label Format, this will govern label printing for an item called up using the **CODE** key if you do not override it by using the **REZERO** + **L** command below.

- change the default label type:

  This changes the default label format for all item codes programmed with the label format set as DEF. Governs label printing for items called up using the **CODE** key if you do not override it using the **REZERO + L** key command below;

- change the NON-ID label type:

  This changes the label format used by the scale when a sample, count and print operation is performed on an item whose ID Code is not programmed into the scale's memory, unless you override it using the **REZERO + L** key command below.

- change all label types temporarily by **REZERO + L**:

  This overrides all other label format programming during the current weighing operation. Once the scale is turned off, the next time it is turned back on it reverts back to the NON-ID label format for items not in memory and the DEFAULT or other format associated with an item code programmed in memory.

To Affect Label Format of...	Use	See Section
all labels until the scale is turned off	**REZERO + L** command	Section 7.6.4
labels for items not programmed into the scale's memory	General Label Program: NON-ID Label Format	Section 7.6.3
labels for items programmed in memory with the DEFAULT Label Format	General Label Program: DEFAULT Label Format	Section 7.6.2
labels for items programmed in memory with a Label Format other than the DEFAULT Format	Item Code Programming	Section 7.6.1

Table 7-9. Methods of Changing Label Formats

7.6.1 Change Label Format Associated With an Individual Item Code

As long as the item's label format is not set to DEFAULT, this will govern label printing for an item called up using the **CODE** key if you do not override it by using the **REZERO + L** command in Section 7.6.4.

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate
2. Press the * **REPRINT** key to enter the item code programming mode. You store the data you have entered and exit the programming mode at any time by pressing the **CODE** key. To exit without saving your data press the **MODE** key.
3. Enter the item code number at the flashing cursor. To store the item code and go on to program the unit weight, press the * **REPRINT** key.
4. Press the * **REPRINT** key twice to leave the Unit Weight and Tare Weight programming unchanged and move to the *PROGRAM LABEL FORMAT*.
5. Select a label format for label printing using the **>>** and **<<** keys to move between the available formats. Press the * **REPRINT** key to store the label format.
6. Press the **CODE** key to save the change.
7. Press the **MODE** key three times to return to the Stand-by or weighing mode.

7.6.2 Change the Default Label Type

This changes the default label format for all item codes programmed with the label format set as DEF. Governs label printing for items called up using the **CODE** key if you do not override it using the **REZERO + L** key command in Section 7.6.4 below.

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** key five times to reach the *GENERAL LABEL PROGRAM* screen.
3. Enter a "2" to select the DEFAULT label programming.
4. Select a label format for label printing using the **>>** and **<<** keys to move between the available formats. Press the **CODE** key to store the label format and return to the *GENERAL LABEL PROGRAM* screen.
5. Press the **MODE** key three times to return to the Stand-by or weighing mode.

7.6.3 Change the NON-ID Label Type

This changes the label format used by the scale when a sample, count and print operation is performed on an item whose ID Code is not programmed into the scale's memory, unless you override it using the **REZERO + L** key command in Section 7.6.4 below.

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** key five times to reach the *GENERAL LABEL PROGRAM* screen.
3. Enter a "1" to select the DEFAULT label programming.
4. Select a label format for label printing using the **>>** and **<<** keys to move between the available formats. Press the **CODE** key to store the label format and return to the *GENERAL LABEL PROGRAM* screen.
5. Press the **MODE** key three times to return to the Stand-by or weighing mode.

7.6.4 Change All Label Types Temporarily

This overrides all other label format programming during the current weighing operation. Once the scale is turned off, the next time it is turned back on it reverts back to the NON-ID label format for items not in memory and the DEFAULT or other format associated with an item code programmed in memory.

1. At the Stand-by or weighing mode, while holding down the **REZERO** key, press the **L** key.
2. Select a label format for label printing using the **>>** and **<<** keys to move between the available formats. Press the **CODE** key to store the label format and return to the Stand-by or weighing mode.

7.7 Using External Printers

The DC-200/300 has the capability to connect to external printers using its RS-232 ports. For more information on connecting an external slip or barcode printer to the DC-200/300, please contact your DIGI dealer.

8.0 Job Sequence Programming

The ability to program a series of instructions for the operators that appear on the display is one of the most useful features of the DC-200/300. The scale can be made easy to use even for operators not familiar with all of its features, ensuring accuracy by increasing consistency and avoiding operator error.

Up to 10 job sequence steps can be programmed to be displayed in order, with each instruction having up to 22 characters. Since this screen does not automatically display how many characters remain in the line as you enter, it is helpful to write out your prompts on paper ahead of time to determine the best wording possible within the 22 character limit.

Note: *For the job sequence prompts to appear on the display, SPEC 13 – JOB SEQUENCE must be set to "1: ENABLE".*

8.1 General Instructions

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming mode, will illuminate
2. Press the **+** or **-** key until you reach the program job sequence mode.
3. Choose the job sequence number for the step you want to program. If you are programming a new job sequence or programming one for the first time, to enter a **1** followed by the *** REPRINT** key. If you are adding steps to an existing sequence you can start at a later step. (Ex. If you have an existing job sequence of 5 steps and want to add a sixth, enter a **6** followed by the *** REPRINT** key.)
4. Use the alphanumeric keyboard to enter an instruction of up to 22 characters to be displayed. Press the **SHIFT UP** key followed by the **Q** key to insert a space. You can also use any of the ASCII codes given in Section 12.6.1. Once you have entered the first instruction, press the *** REPRINT** key to move to the next step.
5. Next you can associate a key with the instruction you have just entered. When this key is pressed the job sequence will advance to the next step. If the key you choose also has a function associated with it (**TARE, * REPRINT, UNIT WEIGHT,** etc.), the scale will carry out that function and then move to the next step.

   Note: *Do not use the* **+** *(plus) or* *** REPRINT** *keys to move to the next job sequence step unless you want to print a label as part of the operation.*

   You can scroll through the available keys by using the **<<** and **>>** keys. When the key you want to use is displayed, press the **CODE** key to store it.
6. If you want the job sequence steps to no longer be displayed at the end of the task, prompt the operator to press the **CLEAR** key once as the last step. If you want the job sequence to start over again once the task is done, prompt the operator to press the **CLEAR** key twice as the last step.
7. Repeat Steps 3-6 above until you have programmed all the steps you want. To exit programming mode and return to the stand-by screen, press the **MODE** key twice. At the stand-by screen you will see the prompt for the first step in the job sequence flashing on the second line of the display.

8.2 Example of Job Sequence Programming

In this example you are going to program a 6 step job sequence that will include taring out a container, establishing a unit weight, weighing and counting a bin of parts, and printing a label. At the end we will return the scale to the beginning of the job sequence so the task can begin again. All the operator needs to know is to follow the instructions on the display.

Note: *This job sequence requires that the unit weight of the parts being counted and weighed is high enough that the initial sample of 10 pieces is enough to set the unit weight without the INSUFF lamp lighting up. For more information on the calculation of unit weights,*

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key twice to reach the program job sequence mode.
3. Enter a **1**, followed by the *** REPRINT** key to program the first step in the job sequence. Enter *PLACE BIN & PRESS TARE* using the alphanumeric keyboard and using **SHIFT UP + Q** to enter the spaces between the words. Then press the *** REPRINT** key to move to the next step.

4. Press the **>>** key until you see the option for *3 TARE (T)*. Press the **CODE** key to assign the **TARE** key to step one of the job sequence. Now when the operator follows the instruction to press the **TARE** key, it will both tare out the empty bin and move the prompt to the next job sequence step.
5. Enter a **3**, followed by the *** REPRINT** key. Enter *PUT 10 PCS & PRESS PCS*, then press the *** REPRINT** key.
6. Press the **>>** key until you see the option for *6 PCS*. Press the **CODE** key to assign the **PIECES** key to step three of the job sequence.
7. Enter a **4**, followed by the *** REPRINT** key. Enter *PUT PARTS/PUSH REPRINT*, then press the *** REPRINT** key.
8. Press the **>>** key until you see the option for *2 PRINT (*)*. Press the **CODE** key.
9. Enter a **5**, followed by the *** REPRINT** key. Enter *PRESS CLEAR TWICE*, then press the *** REPRINT** key.
10. Press the **>>** key until you see the option for *8 CLEAR*. Press the **CODE** key.
11. Press the **MODE** key three times to return to the stand-by screen. Shortly you will see the first job sequence instruction flashing on the second line of the display.

8.3 Modifying a Job Sequence Step

This function allows you to change the instruction prompt that is displayed or the associated key for any existing step in the job sequence.

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate
2. Press the **+** (plus) key twice to reach the program job sequence mode.
3. Enter the job sequence number for the step you want to modify then press the *** REPRINT** key. The instruction prompt previously programmed will be displayed on the screen.
4. Starting at the first character you can enter a new prompt for the operator from the alphanumeric keyboard. The new characters will overwrite the old ones. If there are characters left at the end of the string that you want to delete or if you want to delete a word in the middle of the prompt, use the **>>** key to move the cursor to the space just past the character(s) you want to delete. Then press the **CLEAR** key to delete the character to the left of that space. Repeat as many times as necessary to edit the instruction prompt. Press the *** REPRINT** key to save the change.

   Next you can change the key assigned to complete that job sequence step. You can scroll through the available keys by using the **<<** and **>>** keys. When the key you want to use is displayed, press the **CODE** key to store it.

8.4 Deleting a Job Sequence Step

This function allows you to delete a step that is no longer necessary in the job sequence programming.

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate
2. Press the **+** or **-** key until you reach the program job sequence mode.
3. Enter the job sequence number of the step you want to delete. Instead of pressing the *** REPRINT** key to go into the programming of that step, press the **-** key. The display will ask you to confirm that you want to delete this step by pressing the **CLEAR** key. To exit without deleting the step, press the **TARE** key.

9.0 Reports

9.1 Available Reports

The DC-200/300 has the ability to print reports on receipt paper to aid in analysis and management of inventory as well as to review the programming of the scale. These reports can be printed on the DC-300's internal printer or on an external printer for both the DC-200 and 300. The following reports are available:

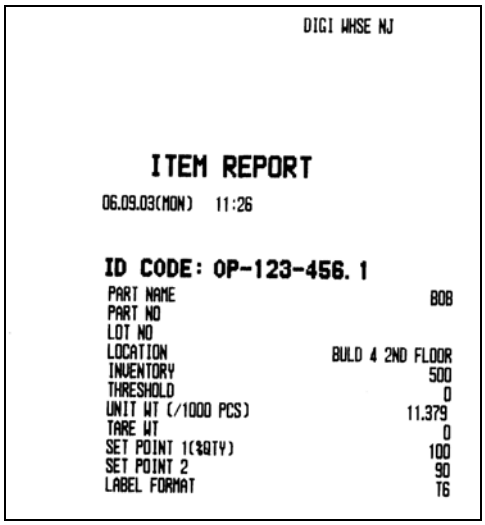
- Item Reports
  - Item Report for a single Item Code (see Section 9.2.1)
  - Item Report for all Item Codes in memory (see Section 9.2.2)
- Inventory Reports
  - Threshold Report showing under-stocked or over-stocked items based on the optimal stock level programmed with each Item Code (see Section 9.3.1)
  - IN and OUT Count Print Report (see Section 9.3.2)
- Programming Reports
  - Factory Name Report (see Section 9.5.1)
  - Address Report (see Section 9.5.2)
  - Text File Report (see Section 9.5.3)
  - Logo Report (see Section 9.5.4)
  - Label Layout Test Report (see Section 9.5.5)
  - Free Format Label Data Report (see Section 9.5.6)

9.2 Item Reports

9.2.1 One Item Report

This option prints all stored information about the selected item code. To print a report of all information about all item codes in memory, see below.

1. From the stand-by screen, press the **MODE** key once to enter the report mode. The *X* annunciator will be illuminated confirming you are in report mode.
2. Press the * **REPRINT** key to select *1: ITEM REPORT* which is the first available option shown.
3. Press the * **REPRINT** key again to select *1. ONE ITEM PRINT* mode.
4. Enter the item code for the item you want a report on. This must be an existing item code already programmed into memory (see Section 5.11.4 for instructions on adding Item Codes to memory). You can also use the wild card character*?* to print ranges of item codes on this report. Example: entering *1?* will cause the report to print all item numbers beginning with *1*.
5. Press the * **REPRINT** key to print out the report for the item you have chosen. If you need to stop the printing process while it is going on, press the **FEED** key.
6. To return to the select report screen, press the **PIECES** key, followed by the **CLEAR** key. To return to the stand-by screen from this point, press the **MODE** key 3 times.


DIGI WHSE NJ

ITEM REPORT

06.09.03(MON) 11:26

ID CODE: OP-123-456. 1

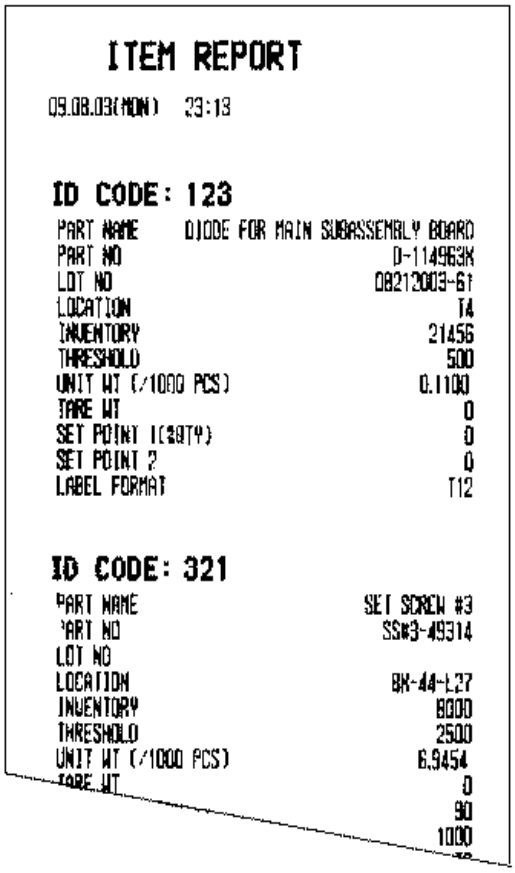
PART NAME	BOB
PART NO	
LOT NO	
LOCATION	BULD 4 2ND FLOOR
INVENTORY	500
THRESHOLD	0
UNIT WT (/1000 PCS)	11.379
TARE WT	0
SET POINT 1(%QTY)	100
SET POINT 2	90
LABEL FORMAT	16

Figure 9-1. Item Report

9.2.2 All Item Print

This option prints all the stored information about each item code stored in memory. To print a report for a single Item Code, see Section 9.2.1.

1. From the stand-by screen, press the **MODE** key once to enter the report mode. The *X* annunciator will be illuminated confirming you are in report mode.
2. Press the * **REPRINT** key to select *1. ITEM REPORT* which is the first available option shown.
3. Press the **+** key to move from option 1.*ONE ITEM PRINT* to option 2. *ALL ITEM PRINT*.
4. To start printing the report, press the * **REPRINT** key. To stop at any time while the report is printing, press the **FEED** key.
5. To return to the select report screen, press the **PIECES** key, followed by the **CLEAR** key. To return to the stand-by screen from this point, press the **MODE** key 4 times.


ITEM REPORT

09.08.03(MON) 23:13

ID CODE: 123

PART NAME	DIODE FOR MAIN SUBASSEMBLY BOARD
PART NO	D-114963K
LOT NO	08212003-61
LOCATION	T4
INVENTORY	21456
THRESHOLD	500
UNIT WT (/1000 PCS)	0.1100
TARE WT	0
SET POINT 1(%QTY)	0
SET POINT 2	0
LABEL FORMAT	T12

ID CODE: 321

PART NAME	SET SCREW #3
PART NO	SS#3-49314
LOT NO	
LOCATION	BK-44-L27
INVENTORY	8000
THRESHOLD	2500
UNIT WT (/1000 PCS)	6.9454
TARE WT	0
	90
	1000

Figure 9-2. All Item Report

9.3 Inventory Reports

These reports help you to manage your inventory so that you don't have stockouts halting production or waste from overstocking parts. It also allows you to identify obsolete or other items that have no movement over a period of time so that your inventory can be valued properly.

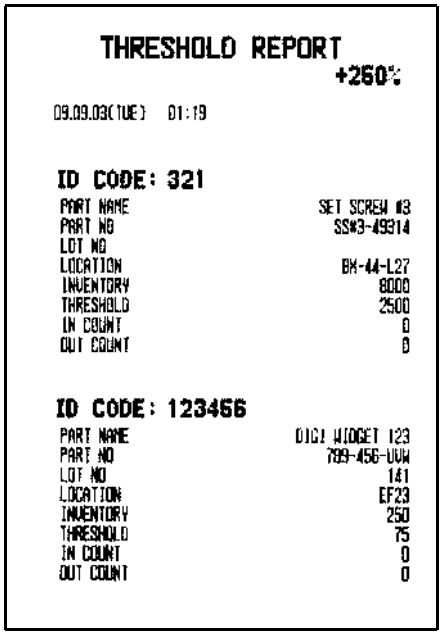
9.3.1 Threshold Report

The threshold report identifies over-stocked and under-stocked items by comparing the current inventory level with optimal stock levels (threshold levels) you set for each item at the time the item was entered. To set the optimal stock or threshold levels, see Item Code programming and/or Item Code Maintenance.The formula used by the scale for the calculation is as follows:

Stock Level (%) = [(Inventory – Threshold) / Threshold] x 100.

The report will only show those items whose stock level (defined by the formula above) is equal to or below the percentage you enter as the cutoff. You can enter a positive or negative percentage.

1. From the stand-by screen, press the **MODE** key once to enter the report mode. The *X* annunciator will be illuminated confirming you are in report mode.
2. Press the **+** key to move to 2: *INVENTORY REPORT*. Then press the * **REPRINT** key to enter the inventory report mode.
3. Press the * **REPRINT** key again to select the first option shown, *1: THRESHOLD PRINT*.
4. At the *Stock Level (%)* screen, enter the percentage over or under the optimal (threshold) level that you want to test for. (Ex. If you want to see all items that are 20% or more below their optimal level, enter –20. If you want to see all items that are 15% above their optimal level or less, enter +15).
5. Press the * **REPRINT** key to print the report using the parameters requested. To stop at any time while the report is printing, press the **FEED** key.
6. To return to the select report screen, press the **PIECES** key, followed by the **CLEAR** key. To return to the stand-by screen from this point, press the **MODE** key 4 times.


THRESHOLD REPORT
+250%

09.09.03(TUE) 01:19

ID CODE: 321

PART NAME	SET SCREW #3
PART NO	SS#3-49314
LOT NO	
LOCATION	BK-44-L27
INVENTORY	8000
THRESHOLD	2500
IN COUNT	0
OUT COUNT	0

ID CODE: 123456

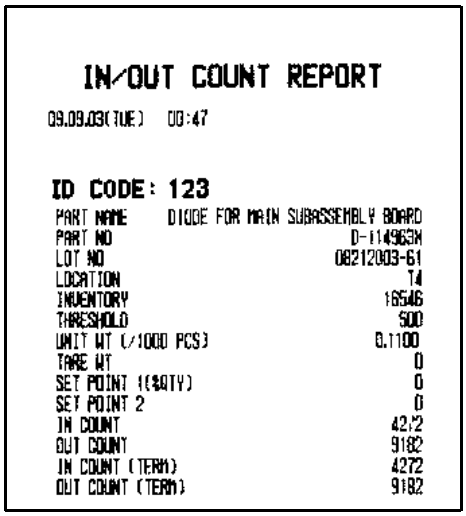
PART NAME	DIGI WIDGET 123
PART NO	789-456-UVW
LOT NO	161
LOCATION	EF23
INVENTORY	250
THRESHOLD	75
IN COUNT	0
OUT COUNT	0

Figure 9-3. Threshold Report

9.3.2 In/Out Count Report

This is a movement report showing all items that had quantities received or taken from the inventory stored in the scale. After printing the report, you can clear the counts for a day, a specific term of time or all the counts in order to begin counting again.

1. From the stand-by screen, press the **MODE** key once to enter the report mode. The *X* annunciator will be illuminated confirming you are in report mode.
2. Press the **+** key to move to 2: *INVENTORY REPORT*. Then press the * **REPRINT** key to enter the inventory report mode.
3. Press the **+** key to move to the option for *2: IN/OUT COUNT PRINT*, then press the * **REPRINT** key again to select it.
4. Press the * **REPRINT** key to print the report. To stop at any time while the report is printing, press the **FEED** key.
5. To return to the select report screen, press the **PIECES** key, followed by the **CLEAR** key. To return to the stand-by screen from this point, press the **MODE** key 4 times.


IN/OUT COUNT REPORT

09.09.03(TUE) 00:47

ID CODE: 123

PART NAME	DIODE FOR MAIN SUBASSEMBLY BOARD
PART NO	D-1149631
LOT NO	08212003-61
LOCATION	T4
INVENTORY	16546
THRESHOLD	500
UNIT WT (/1000 PCS)	0.1100
TARE WT	0
SET POINT 1(%QTY)	0
SET POINT 2	0
IN COUNT	4272
OUT COUNT	9182
IN COUNT (TERM)	4272
OUT COUNT (TERM)	9182

Figure 9-4. In/Out Count Report

9.3.3 Clearing the In/Out Count Register

In order to track inventory movements by day, shift or other time-frame, the in/out counts must be cleared after printing the report in order to start a new period.

1. From the stand-by screen, press the **MODE** key once to enter the report mode. The *X* annunciator will be illuminated confirming you are in report mode.
2. Press the **+** key to move to 2: *INVENTORY REPORT.* Then press the * **REPRINT** key to enter the inventory report mode.
3. Press the **+** key twice to move to the option for *3: CLEAR IN/OUT COUNT*, then press the * **REPRINT** key again to select it.
4. You now have three options: *1: DAILY, 2: TERM or 3: ALL*. Choose the type of register you want to clear by pressing the number key corresponding to the one you want to clear. The display will briefly show "*Please wait …"* and then the display will return to the clear in/out count mode. If there is nothing in the registers, the scale will display the message *FILE DELETE ERROR*.
5. You can now choose to clear one of the other In/Out registers or exit the report mode. To return to the select report screen, press the **PIECES** key, followed by the **CLEAR** key. To return to the stand-by screen from this point, press the **MODE** key 4 times.

9.4 Shelf Location Label Print (DC-300 only)

This option allows you to print labels that can either be used for shipping or used to mark warehouse shelf locations to aid in picking and stocking of items. In this operation you can select the format of the label to be printed. If the standard label formats do not allow print areas for the data you want to appear, see Section 7.5 on how to program the free format label internal to the scale or see Section 7.3 on how to use the DC-300's Label Design utility program on a computer to format a custom label.

1. From the stand-by screen, press the **MODE** key once to enter the report mode. The *X* annunciator will be illuminated, confirming you are in report mode.
2. Press the **+** key twice to move to 3: *SHELF LOCATION PRINT*. Then press the * **REPRINT** key to enter the shelf location print mode.
3. Enter the item code for the item you want a report on. This must be an existing item code already programmed into memory (see Section 5.11.4 for instructions on adding Item Codes to memory). Press the * **REPRINT** key to select this item.
4. The display will show the label format that was programmed when the item code was originally entered. You can change the label format to any other existing format by using the **<<** and **>>** keys to move between the options.
5. Once you have the format you want on the screen, press the * **REPRINT** key to print the label for the item you have chosen. If you need to stop the printing process while it is going on, press the **FEED** key.
6. To return to the select report screen, press the **PIECES** key, followed by the **CLEAR** key. To return to the stand-by screen from this point, press the **MODE** key 4 times.

Figure 9-5. Sample Shelf Location Label Using Standard Label T6-12

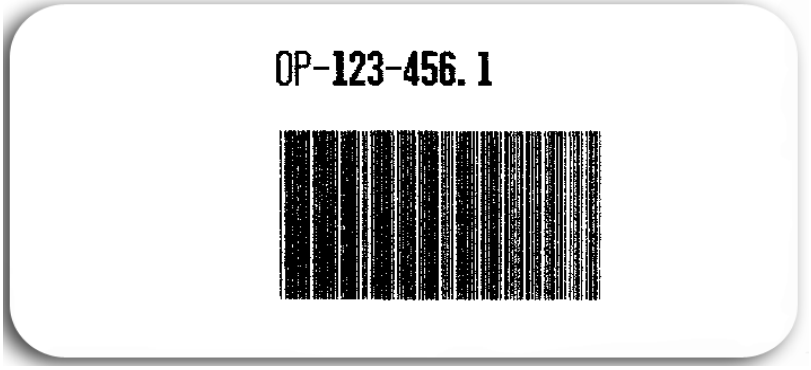


Figure 9-6. Sample Shelf Location Label Using Standard Label T9-15

9.5 Programming Reports (DC-300 only)

9.5.1 Factory Name Report (DC-300 only)

To check what factory names are already programmed into the scale and see what factory name files are still available, follow the instructions below to print a report of the factory name file. You can print a factory name report for a single name or for all the names that are programmed. See Section 7.2.1 on how to program a factory name.

Before printing the report, please make sure that the DC-200/300 printer is loaded with receipt paper rather than labels (see Section 7.1.4 on setting up the printer).

1. From the Stand-by screen press the **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** key once to reach the *FACTORY PROGRAMMING* mode.
3. To print the report for a single factory name, enter the number for the factory name file you want to print and press the **TARE** key. To print the report for all factory names in memory, enter a **0** (zero) for the factory number and press the **TARE** key. To stop the printing at any time, press the **FEED** key. The report will show the date and time it was printed, the factory number, and the font size and number of characters on each line (see Section 7.1.3 for font sizes).

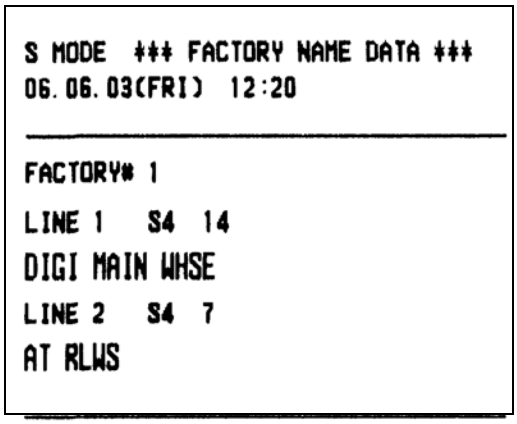


Figure 9-7. Factory Name Report

9.5.2 Address File Report (DC-300 only)

To check what addresses are already programmed into the scale and see what address files are still available, follow the instructions below to print a report of the address file. You can print an address report for a single address or for all the addresses that are programmed. See Section 7.2.2 on how to program an Address File.

Before printing the report, please make sure that the DC-200/300 printer is loaded with receipt paper rather than labels (see Section 7.1.4 on setting up the printer).

1. Press the **MODE** key until the display shows *ITEM PROGRAMMING MODE*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key four times to reach the address programming mode.
3. To print the report for a single address, enter the address number for the existing address file you want to print and press the **TARE** key. To print the report for all factory names in memory, enter a **0** (zero) for the factory number and press the **TARE** key. To stop the printing, press the **FEED** key.

   The report shows the address name at the top, the date and time the data was programmed, the address number, the label format, and the text size and number of characters of each line in the address.

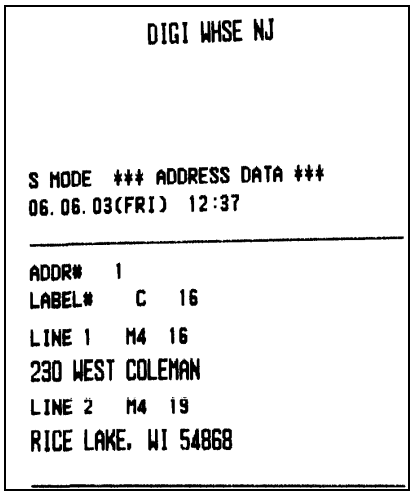


Figure 9-8. Address File Report

9.5.3 Text File Report (DC-300 only)

Up to 20 pre-programmed text files can be stored in the DC-300. See Section 7.2.3 on how to program a text file. These are not associated with a specific item code. Instead, they allow you to print fixed data on labels such as “scale number” or “machine number”. Text files 1-16 can be used on item labels and text files 17-20 are specifically for use on total labels. There can be up to 2 lines programmed for each text file, with the limit depending on the size of the print area and the character size you choose to print at for each label format. Each text field must be defined as belonging to a certain label format (see Section 7.1.1 for Label Formats available). Since the standard label format does not have a print area for extra text fields, a free format label with a text print area programmed must be used (see Section 7.5 on page 91 for instructions on how to set up Free Format labels).

To check what texts are already programmed into the scale and see what text files are still available, follow the instructions below to print a report of the text files. You can print a text file report for a single text file or for all the texts that are programmed.

Before printing the report, please make sure that the DC-200/300 printer is loaded with receipt paper rather than labels (see Section 7.1.4 on setting up the printer).

1. Press the **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key six times to reach the text programming mode.
3. To print the report for a single text file, enter the text number for the existing text file you want to print and press the **TARE** key. To print the report for all text files in memory, enter a **0** (zero) for the text number and press the **TARE** key. To stop the printing, press the **FEED** key.

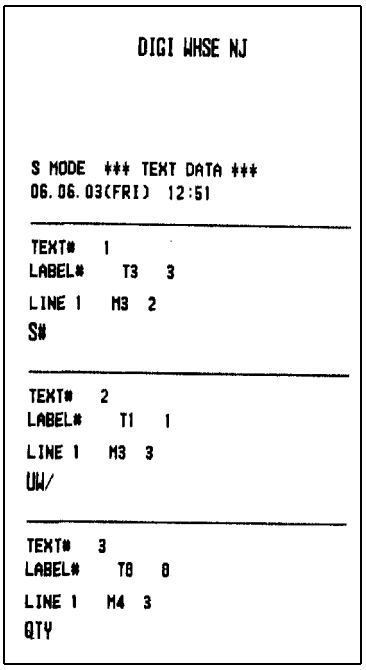


Figure 9-9. Text File Report

9.5.4 Logo File Report (DC-300 only)

To check what logos are already programmed into the scale and see what logo files are still available, follow the instructions below to print a report of the logo file. You can only print a logo report for a single file. There is no report available for all the logo files at once. See Section 7.2.4 on how to program a logo file.

Before printing the report, please make sure that the DC-300 printer is loaded with receipt paper rather than labels (see Section 7.1.4 on setting up the printer).

1. Press the **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the programming mode, will illuminate.
2. Press the **+** (plus) key eight times to reach the *LOGO PROGRAMMING* mode.
3. To print a logo report, enter the logo number for the existing logo file you want to print and press the **TARE** key. To stop the printing, press the **FEED** key.

9.5.5 Label Layout Test Report (DC-300 only)

1. Press **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate.
2. Press the **+** (plus) or **–** (minus) keys to scroll through the programming options until you see the *PROGRAM FREE FORMAT* screen. Enter the Free Format number of the label you want to test print and press the *** REPRINT** key.
3. When prompted *COPY EXISTING FORMAT?*, press the **TARE** key to answer (NO). The data you have previously programmed for this Free Format will be displayed. In the steps below, you will move confirm the label size without changing it until you get to the Item Label programming mode.
4. At *LABEL WIDTH* press the *** REPRINT** key for no change.
5. At *LABEL HEIGHT* press the *** REPRINT** key for no change.
6. At *SELECT LABEL TYPE*, enter **0** to enter Item Label formatting.
7. To move to the Test Print mode you can use the **<<** and **>>** keys to move to Item No. 50 Test Print or enter 50 from the numeric keypad and press the **+** (plus) key. Then press the *** REPRINT** key to enter the Test Print mode.
8. Press the *** REPRINT** key to leave the print Status as "2 – All Print" and print a sample label.
9. Press the **MODE** key three times to return to the Stand-by Screen.

9.5.6 Free Format Label Layout Data Report (DC-300 only)

You can print as a report the parameters of a Free Format you have programmed. There is no report showing all of the Free Formats; only one Free Format can be printed at a time.

1. Press the **MODE** key until the display shows *ITEM CODE PROGRAMMING*. The *S* annunciator, indicating the Programming Mode, will illuminate.
2. Press the **+** (plus) or **–** (minus) keys to scroll through the programming options until you see the *PROGRAM FREE FORMAT* screen. The display will prompt you to enter a Free Format number that will identify this format. Using the numeric keypad, enter the number for the Free Format you want to print a report for.
3. Press the **TARE** key to print out the report for this particular Free Format. To cancel printing once it starts, press the **FEED** key.
4. Once the report has printed, the scale will return to the Free Format programming mode.
5. Press the **MODE** key three times to return to the Stand-by Screen.

10.0 Password Protecting the Programming Functions

In some situations it may be useful to password protect certain functions of the scale so that they can only be used by authorized personnel. Each of the major modes of the scale other than the operation mode can be set to require a password of up to six numeric digits. The ability to set, change or delete passwords in the password mode itself should also be password protected. Another option for protecting certain functions is to require use of the span switch (SPEC 636 internal count protected by span switch and SPEC 637 calibration default spec SPEC 142 mode protected by span switch). (See Section 3.1 Dealer Configuration for instructions on how to set these specifications.)

10.1 How to Program a Password

1. At the stand-by screen, press the **MODE** key until the password mode appears on the display. The *X* annunciator will blink. The scale will now allow you to program a password for the different modes in order.
2. Enter a password for the report (X) mode of up to 6 numeric digits (alphabetic and ASCII characters are not available in this function) and press the * **REPRINT** key to store it. If you do not wish to program a password for this mode, simply press the * **REPRINT** key. The display will move to the next mode, the programming (S) mode shown by the blinking *S* annunciator.
3. If desired, enter a password for the programming (S) mode of up to 6 numeric digits and press the * **REPRINT** key to store it or just press * **REPRINT** to set no password. The display will move to the next mode, the service (Z) mode shown by the blinking *Z* annunciator.
4. If desired, enter a password for the service (Z) mode and press the * **REPRINT** key to store it or just press the * **REPRINT** key to set no password. The display will move to the password (P) mode shown by the having all the mode annunciators blink.
5. If desired, enter a password for the password (P) mode or just press * **REPRINT** key to set no password. This function allows you to require a password in order to be able to access the password-setting mode. Press the * **REPRINT** key to store it. At this point the scale will return to the operation mode.
6. Press the **MODE** key five times to return to the Stand-by screen.

10.2 How to Use a Password

1. From the stand-by screen, press the **MODE** key until you see displayed the mode you want to use. If a password has been set for that mode, the scale display will request the user to enter it.
2. Enter the password for the mode you want to enter and press the * **REPRINT** key.
3. If an incorrect password is entered, the error message *NO GO* will appear on the display for a few seconds. Then the display will return to the password-entering mode.
4. Once a correct password is entered, the display will show the first option under that mode.

10.3 How to Change or Delete a Password

1. At the stand-by screen, press the **MODE** key until the password mode appears on the display.
2. If a password is required to enter the password (P) mode, the display will prompt the user for it. Enter the password followed by the * **REPRINT** key. The password (P) mode will take you through all the other modes for which passwords can be set or changed. To go past any password programming screen without changing the existing setting, press the * **REPRINT** key.
3. You now have the following options:

   •If there is an existing password and you want to keep it the same, you must re-enter it and then press the * **REPRINT** key.

   •If there is an existing password, you can change it simply by entering a new password of up to 6 numeric digits and then pressing the * **REPRINT** key.

   •If there is an existing password, you can delete it and leave this mode without a password by pressing the * **REPRINT** key without entering anything.

   •If there is no existing password for this mode, you can set one by entering up to 6 numeric digits and then press the * **REPRINT** key.

•If there is no existing password for this mode, you can leave it without one by pressing the *** REPRINT** key without entering anything.

You will be prompted to choose one of these options for each mode for which a password can be programmed.

4. Once all of the passwords have been modified, cleared or reconfirmed, the scale will return to the operation mode. Press the **MODE** key five times to return to the Stand-by screen.

11.0 Network Connection

If you use the DC-200/300 default IP Addresses of 192.168.0.1 for the DC-300 or 192.168.0.2 for the DC-200, then you do not need to use Section 11.2 - Machine Setup Utility or Section 11.3 - Changing the IP Address Directly on the Scale. Go directly to Section 11.5 - Setting the Computer's Network Communication.

If your computer network requires that the scale's IP Address be changed, use the steps below in Section 11.2 to change it by way of the Machine Setup Utility. Contact your Network Administrator if you need more information on how to integrate the DC-200/300 as a workstation on your network.

Note: *The instructions and screen shots below apply to computers running Microsoft Windows 98 as their operating system. Windows 2000 and Windows XP installation is similar although the options may not appear in precisely the same place. For help with Windows 2000 or Windows XP installations, see your Network Administrator or contact your DIGI dealer.*

11.1 Checking the Scale's IP Address

You can check to see what the DC-200/300's IP Address is set at by doing the following:

1. Press the **MODE** key three times. The scale will display *SERVICE MODE*. While holding down the **REZERO** key, enter *0416*. The display will show the Scale IP Address. Unless you have modified it as explained in Section 11.2 and Section 11.3, it should show the default address which is 192168000001 for the DC-300 or 192168000002 for the DC-200.
2. To exit the IP Address display, press the **TARE** key. Then press the **MODE** key twice to return to the normal or weighing mode.

11.2 Machine Setup Utility

In most situations you will be able to simply use the DC-200/300's default IP Address. The Machine Setup Utility is only necessary if you need to change the IP address of the scale to avoid conflicts on your network. If you are not sure whether the IP address needs to be changed, please talk to your Network Administrator.

The Machine Setup Utility installs automatically when you run the setup program for the DC-300 Utility program that appears in the Service Tools folder on the DC-300 Setup Tools CD-ROM you received with your scale. If you have not yet installed the DC-300 Utility programs, please see Section 6.2.2 on page 54.

1. On your computer, open the Machine Setup Utility program If you used the defaults when you installed the program, it will appear under the DC-300 Utility group under *Programs*.
2. To change the IP Address of the DC-200/300, press the **Edit** button. Enter the new address in the "IP Address" field.

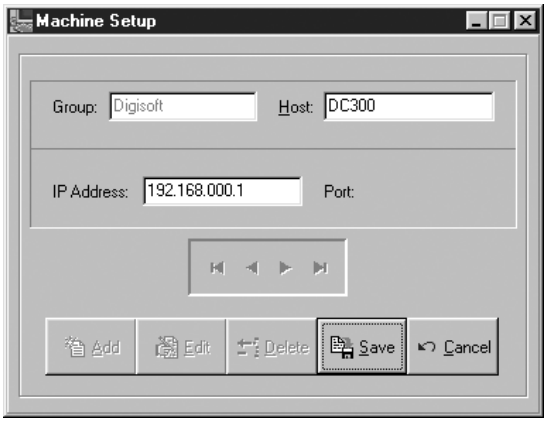


Figure 11-1. Machine Setup Utility

3. After entering the new address, press the **SAVE** button.

11.3 Changing the IP Address Directly on the Scale

In most situations you will be able to simply use the DC-200/300's default IP Address.

To change the IP address of the DC-200/300 scale using the Machine Setup Utility program that is in the Service Tools Folder on your DC-300 Setup Tools CD-ROM, see Section 11.2. The scale's IP address can also be changed directly on the scale itself.

To change the IP address of the DC-200/300 directly from the keyboard of the scale, follow the instructions below:

1. Press the **MODE** key three times. The scale will display *SERVICE MODE*. While holding down the **REZERO** key, enter *0416*. The display will show the Scale IP Address. Unless you have modified it as explained in Section 11.2, it should show the default address which is 192168001000 for the DC-300 and 192168000002 for the DC-200.
2. To change the IP address, enter a new one from the numeric keypad. Note that the digits you enter will show up starting with the fourth character to the right. The last three digits represent the port number and are set by setting *SPEC 41 - PORT NUMBER (IP)*. See Section 3.1.1 for information on how to change the scale's SPEC settings.
3. To save the changes and exit the IP Address display, press the **CODE** key. To exit without saving your changes, press the **TARE** key. Then press the **MODE** key twice to return to the normal or weighing mode.

11.4 Ethernet Cable Connection Between the Scale and the Computer

If you are connecting the scale directly to an IBM-compatible PC, use a Category 5 Ethernet Crossover cable. (The cable MUST be a crossover cable, not a standard Ethernet cable.) Plug one end of the cable into the Ethernet port on the DC-200/300 scale and the other end into the network card on the computer. If you need help selecting the right cable or port on your computer, contact your Network Administrator or your DIGI dealer.

If you are connecting the scale to a network hub, use a regular or "straight" Category 5 Ethernet cable. Plug one end of the cable into the Ethernet port on the DC-200/300 scale and the other end into an open port on the hub. If you need help selecting the right cable or checking the configuration of your hub, contact your Network Administrator.

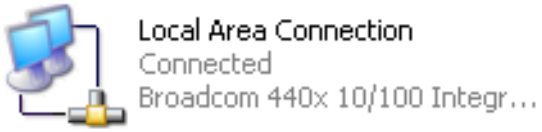
11.5 Setting the Computer's Network Communication

Note: *The instructions and screen shots below apply to computers running Microsoft Windows XP as their operating system. Earlier versions of Windows are similar although the options may not appear in precisely the same place. For help with installations in other versions of Windows, see your Network Administrator or contact Rice Lake Weighing Systems.*

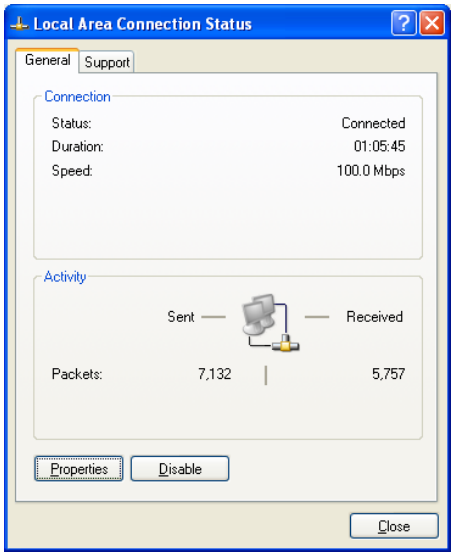
1. Open the Windows Control Panel.
2. Open the Network Dialog Box by double-clicking on the Network icon in the Control Panel.

Figure 11-2. Network Selection in Control Panel

3. In the Network Connections screen double-click on the icon for the Local Area Connection.



4. The Local Connection Status box will appear. Click on the **Properties** button.



5. The Local Area Connections Properties dialog box will appear. Find the listing for your network interface card (NIC) in relation to the TCP/IP protocol. (You may have to scroll down to find it.)

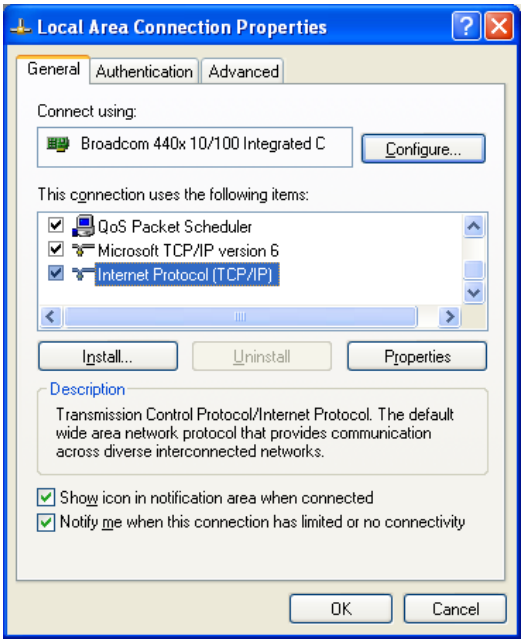


Figure 11-3. Select Network Interface Card

6. Once you have selected your NIC card for the TCP/IP protocol, click on the Properties button. This will open the Properties dialog box.

   At the IP Address tab, click the radio button for “Specify an IP address”. Then enter an IP address for your computer that is different than the scale’s IP address. Enter a Subnet mask of 255.255.255.0. Then click the **OK** button.

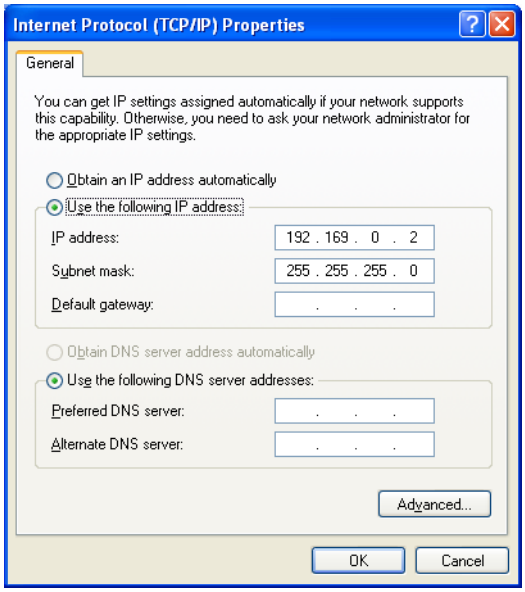

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 169 . 0 . 2
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Figure 11-4. Assign IP Address to Computer

7. Exit the Local Area Connection Properties and Local Area Connection Status windows by clicking on the **Close** button in each one.
8. You may be prompted to insert your Windows operating disc. If so, put the disc in your CD drive and click the **OK** button.
9. After the necessary files have been updated on your computer, you will be asked to restart your computer so that the changes can be registered. Click the **Yes** button..

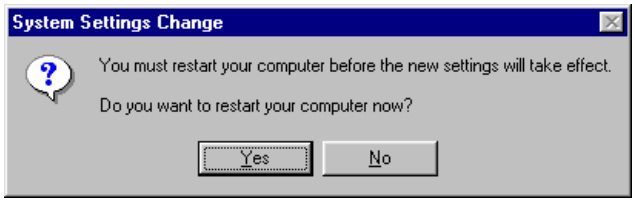
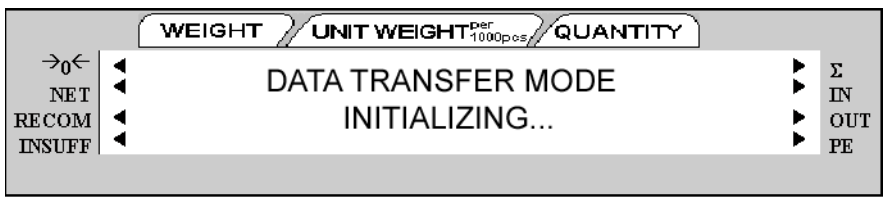

System Settings Change
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

Figure 11-5. Restart Computer Dialog Box

10. After the necessary files have been updated on your computer, you will be asked to restart your computer so that the changes can be registered. Click the **Yes** button.
11. Once your computer has restarted, it is ready to communicate to the scale. Go to Section 11.6 below.

11.6 Entering the Data Transfer Mode on the Scale

1. On the DC-200/300, press **REZERO + SHIFT UP**. The scale will briefly display a message saying that the Data Transfer Mode is initializing.



2. Next you will be prompted to restart the scale.

3. Turn the scale off and on again. After the power-up sequence, the DC-200/300 will confirm that it is ready for data transfer to and from the computer.

4. You can now use the software tools you received on the disc that came with your DC-200/300 scale. For instructions on how to use the various programs, please see the following sections of this manual.

   • to upload and download specification settings for scale, use the Spec Upload program (see Section 3.2.1).

   • to upload and download inventory items as well as text, address, logo and job sequence data, use the DC-300 Utility program (see Section 6.2).

   • to design and upload free label formats, use the DC-300 Label Editor program (see Section 7.3).

11.7 Exiting The Data Transfer Mode on the Scale

When you are done transferring data between the scale and a computer, use the following steps to return the scale to normal weighing operations.

1. Press **REZERO + SHIFT DOWN**. The scale will briefly display a message saying that the Data Transfer Mode is exiting.

2. Next you will be prompted to restart the scale.

3. Once you have restarted the scale, you will be returned to normal weighing operations.

12.0 Appendix

12.1 DC-200/300 Error Message List

The DC-200/300's two-line alphanumeric display allows for detailed error messages. Use Table 12-1 below to find the error message, possible causes for the error and ways to correct the problem. If these suggestions fail to correct the situation, please contact your DIGI dealer for assistance.

Error Message	Possible Causes	Corrective Action
Paper End	The label sensor does not sense a label or there may be no more labels	Replace the label roll (see Section 7.1.4 - label and paper roll setup)
Please press feed key	A label misfeed	Press the Feed key to re-align the labels
Please peel label	The peel sensor has been activated	Peel off the current label to clear the sensor
Non print	No manual printing available	
Non label	No free format has been programmed	Set a free format or choose one of the pre-programmed standard label formats (see Section 7.1.1 Available Label Types and Section 7.5.5 Programming a Free Format Label).
Insufficient space	The print area is not large enough to fit data.	Change the size of the print area (see Section 7.5.5 Programming a Free Format Label) or change the label size (see Section 7.1.1 Available Label Types)
Job sequence not exist	No job sequence has been programmed	Program the scale with a job sequence (see Section 8.0 Job Sequence Programming)
Read file	Errors reading the file, memory errors	Clear the memory (contact your DIGI dealer)
Non factory name	No factory name has been programmed	Program a factory name (see Section 7.2.1 How to Program a Factory Name)
Printer head no close	The thermal print head on the built-in printer has not been locked in place	Close the paper clamp on the print head (see Section 7.1.4 Label and Paper Roll Setup)
Write file	Errors writing files, memory problems	Clear the memory (contact your DIGI dealer)
No memory	Not enough memory to carry out the requested action	Add memory to the scale or delete unnecessary data items.
File delete error	Error deleting files, memory problem	Clear the memory (contact your DIGI dealer)
Item code not exist	The requested item code does not exist in the item database	Program an item code into the scale (see Section 6.1.2 Programming Item Code)
Total quantity = 0	Cannot print when the total quantity is zero	Enter a quantity value
Weight overflow	The weight is over the maximum capacity of the scale	Put a smaller number of pieces on the scale or switch the weight to a higher-capacity platform.
Illegal operation	The operation that you are trying to perform is incorrect	Check instructions for this operation and try again.
Quantity = 0	Cannot print when quantity is zero	Enter a quantity value
Key invalid	The key you have pressed is not valid during this operation	Recheck the instructions for this operation to see what the valid key functions are (see Section 1.3.2 Key Functions)
Number invalid	You have exceeded the maximum number of characters allowed for this field	Abbreviate the text you are entering so that it fits. See Section 7.1.3 for character lengths allowed for different fields
Exceed max limit	You have exceeded the maximum number of characters allowed for this fields	Abbreviate the text you are entering so that it fits. See Section 7.1.3 for character lengths allowed for different fields

Table 12-1. DC-200/300 Error Message List

Error Message	Possible Causes	Corrective Action
Please press code key	Save the data and exit programming by pressing the Code key	
Date invalid	The date you have entered is not in the necessary format	Enter date in correct format Note: SPEC 05 sets date format. Default is MM: DD: YY. See Section 3.0 Configuration Settings.
Time invalid	The time you entered is not in the necessary format	Enter time in correct format Note: SPEC 06 sets time format. Default is HH: MM in 12-hour format. See Section 3.0 Configuration Settings.
Logo not exist	The requested logo is not programmed into the scale	Program a logo into the scale (see Section 5.11.1 Logo Files)
Label invalid	The data requested to print on the label does not exist	Check the item to see if this data has been entered (see Section 6.1.3 View Item Information)
Data invalid	The data keyed in is not in a valid format	Recheck the acceptable format for the data item (see Section 6.1.2 Programing Item Code)
Quantity overflow	The quantity data is over the limit for the number of places that can be displayed	Work with a smaller quantity. The maximum number of digits for the quantity display is 6.
Record chosen in use	The record you want to delete is in use by another data file	Close the operation that is using the record and restart the delete procedure.
Address not exist	The address does not exist in the scale's database	Program an address into the scale (see Section 7.2.2 How to Program an Address File)
Text not exist	The text field does not exist in the scale's database	Program a text field into the scale (see Section 7.2.3 How to Program a Text File)
No print area	This label format does not include a print area for this field	Change to a different pre-programmed label format (see Section 7.1.2 Label Format Samples), or program a free format label that includes the item (see Section 7.5 Free Format Label Programming)
Print inhibited	A weigh item cannot be printed during a counting operation	Exit the operation you are in, then re-try printing the label.
Scale A start up err press clr key to exit	Unable to detect scale A because it is not stable or the weight on the platform is out of the scale start-up range. Press Clear key to exit.	Bring the weight on the platform down to within the start-up range.
Scale B start up err press clr key to exit	Unable to detect scale B because it is not stable or the weight on the platform is out of the scale start-up range. Press Clear key to exit.	Bring the weight on the platform down to within the start-up range
Scale C start up err press clr key to exit	Unable to detect scale C because it is not stable or the weight on the platform is out of the scale start-up range. Press Clear key to exit.	Bring the weight on the platform down to within the start-up range

Table 12-1. DC-200/300 Error Message List

12.2 Interface Ports

12.2.1 Overview of Interface Ports

The DC-200/300 is equipped with a number of interface ports enabling it to be connected with other devices. There are RS-232C ports that allow connection to bar code readers or printers. An IBM keyboard interface permits connection to an external keyboard or wedge scanner. The Ethernet connection makes the DC-200/300 a networkable workstation and allows you to use the Utility Transfer and Label Design programs.

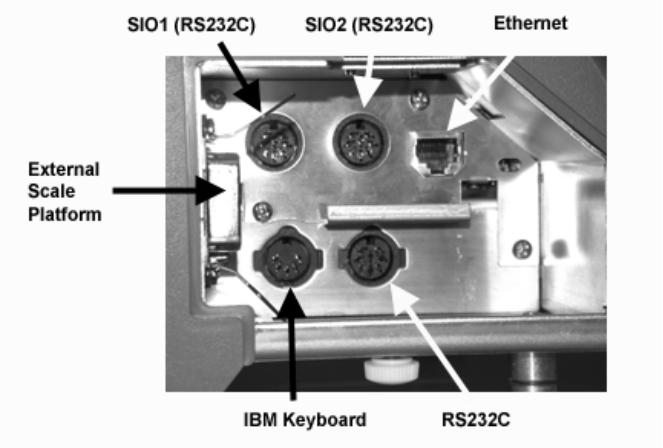


Figure 12-1. DC-200/300 Interface Ports

12.2.2 Spec Settings for Interface Ports

Depending on what external devices you want to attach to the interface ports, you must set the DC-200/300's specs accordingly to get the correctly formatted output. For information on how to set the DC-200/300's specifications, see Section 3.1.

IBM Keyboard Port

If connecting to...	Set Specs as follows...
an IBM keyboard	SPEC 37: IBM KEYBOARD PORT to "0: IBM KEYBOARD"
a barcode scanner	SPEC 37: IBM KEYBOARD PORT to "1: BARCODE SCANNER" SPEC 38: WITH HEADER (BCS) to "0: YES" or "1: NO" depending on your application's need

Table 12-2. Spec Settings for IBM Keyboard Port

The DC-200/300 keyboard port is designed to take a wedge scanner (a scanner that emulates a keyboard). For more information on compatible scanners, consult your DIGI dealer.

RS232C Port

If connecting to...	Set specs as follows...
a PC	SPEC 15: SIO SELECT JOB to “2: PC” SPEC 16: BAUD RATES (SIO) to the proper baud rate for your application SPEC 17: DATA LENGTH (SIO) to the proper length for your application SPEC 18: PARITY BIT (SIO) to the proper setting for your application SPEC 19: STOP BIT (SIO) to the proper setting for your application
an external printer	SPEC 15: SIO SELECT JOB to “3: PRINTER SPEC 16: BAUD RATES (SIO) tothe proper baud rate for your application SPEC 17: DATA LENGTH (SIO) to the proper length for your application SPEC 18: PARITY BIT (SIO) to the proper setting for your application SPEC 19: STOP BIT (SIO) to the proper setting for your application SPEC 32: TYPE OF PRINTER to the type of external printer you are using
a barcode scanner	SPEC 15: SIO SELECT JOB to “4: BARCODE SCANNER” SPEC 16: BAUD RATES (SIO) to the proper baud rate for you scanner SPEC 17: DATA LENGTH (SIO) to the proper length for your application SPEC 18: PARITY BIT (SIO) to the proper setting for your application SPEC 19: STOP BIT (SIO) to the proper setting for your application

Table 12-3. RS232 Port Connections

RS232 Option Card (SIO1 and SIO2)

These two RS232C ports are set in tandem using the following specifications:

If connecting to...	Set specs as follows...
a PC on SIO1 an external printer on SIO2	SPEC 20: RS232 OPTION CARD to "3: PRN (DIN 2) - PC (DIN 1) SPEC 21: BAUD RATE (DIN 1) to the appropriate baud rate for the PC SPEC 22: DATA LENGTH (DIN 1) to the appropriate number of bits for the PC SPEC 23: STOP BIT (DIN 1) to the appropriate number of bits for the PC SPEC 24: PARITY BIT (DIN 1) to the appropriate odd or even for the PC SPEC 25: BAUD RATE (DIN 2) to the appropriate baud rate for the printer SPEC 26: DATA LENGTH (DIN 2) to the appropriate number of bits for the printer SPEC 27: STOP BIT (DIN 2) to the appropriate number of bits for the printer SPEC 28: PARITY BIT (DIN 1) to the appropriate odd or even for the printer SPEC 32: TYPE OF PRINTER to the appropriate setting for the printer you are connecting
an external printer on SIO1 a PC on SIO2	SPEC 20: RS232 OPTION CARD to "4: PC (DIN 2) - PRN (DIN 1) SPEC 21: BAUD RATE (DIN 1) to the appropriate baud rate for the printer SPEC 22: DATA LENGTH (DIN 1) to the appropriate number of bits for the printer SPEC 23: STOP BIT (DIN 1) to the appropriate number of bits for the printer SPEC 24: PARITY BIT (DIN 1) to the appropriate odd or even for the printer SPEC 25: BAUD RATE (DIN 2) to the appropriate baud rate for the PC SPEC 26: DATA LENGTH (DIN 2) to the appropriate number of bits for the PC SPEC 27: STOP BIT (DIN 2) to the appropriate number of bits for the PC SPEC 28: PARITY BIT (DIN 1) to the appropriate odd or even for the PC SPEC 32: TYPE OF PRINTER to the appropriate setting for the printer you are connecting

Table 12-4. Spec Settings for RS232C Ports SIO1 and SIO2

Ethernet Port

When you connect a Category 5 Ethernet cable between your DC-200/300 scale and a computer or a network hub, you do not need to reset the specs in the DC-200/300 to recognize the network connection. Please see Section 11.4 for more information on setting up your computer and DC-200/300 using the Ethernet port.

12.2.3 Connection from Scale to PC via the RS-232 Port

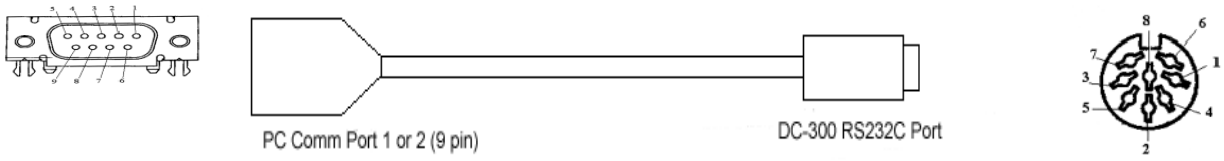


Figure 12-2. Connection from Scale to PC

Pin Number	Signal
1	CD
2	RXD
3	TXD
4	
5	GND
6	DSR
7	RTS
8	CTS
9	

Table 12-5. Nine-Pin Plug Pin Description

Pin Number	Signal
1	CTS
2	GND
3	DSR
4	RXD
5	TXD
6	DTR
7	RTS
8	Vcc

Table 12-6. Eight-Pin DIN Plug Pin Description

12.2.4 Connection from Scale to PC via Ethernet Port

If you are connecting the scale directly to an IBM-compatible PC, use a Category 5 Ethernet Crossover cable. (The cable MUST be a crossover cable, not a standard Ethernet cable.) Plug one end of the cable into the Ethernet port on the DC-200/300 scale and the other end into the network card on the computer. If you need help selecting the right cable or port on your computer, contact your Network Administrator or your DIGI dealer.

If you are connecting the scale to a network hub, use a regular or "straight" Category 5 Ethernet cable. Plug one end of the cable into the Ethernet port on the DC-200/300 scale and the other end into an open port on the hub. If you need help selecting the right cable or checking the configuration of your hub, contact your Network Administrator.

12.2.5 Connection from Scale to Printer

Figure 12-3. Connection from Scale to Printer

Pin Number	Description
1	
2	RXD
3	TXD
4	
5	GND
6	
7	RTS
8	CTS
9	

Table 12-7. Nine-Pin DIN Connector- External Printer

Pin Number	Description
1	CTS
2	GND
3	DSR
4	RXD
5	TXD
6	DTR
7	RTS
8	Vcc

Table 12-8. Eight-Pin DIN Connector - DC-300

Pin Number	Description
1	CTS
2	GND
3	DSR
4	RXD
5	TXD
6	DTR
7	RTS
8	Vcc

Table 12-9. Eight-Pin DIN Connector - DC-300

12.2.6 Connection From Scale to Remote Platform

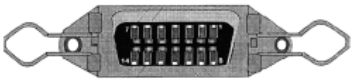


Figure 12-4. Fourteen-Pin Amphenol Female

Pin Number	Remote Platform Connector Description
1	Not used
2	Not used
3	+ Excitation
4	- Excitation
5	
6	+ Signal
7	- Signal
8	Shield
9 through 14	Not used

Table 12-10. Remote Platform Pin Identification and Function

12.3 Connecting an IBM Keyboard

The DC-200/300 can be connected to an IBM PC/AT keyboard to speed data entry in the operation and programming modes. The keyboard connects to the scale at the port labeled IBM KEYBD.

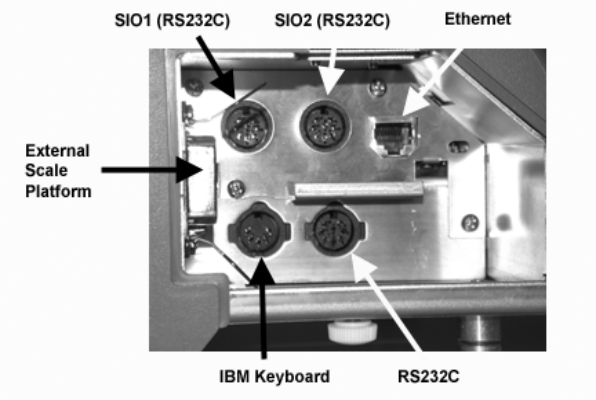


Figure 12-5. Keyboard Port Location

Set SPEC 37:IBM keyboard port to *0: IBM KEYBOARD*.

Note: *For instructions on how to set the customer specifications, refer to Section 3.1.1*

The connector must be a 5-pin DIN (female) with the following pin configuration:

Pin Number	Signal
1	Clock
2	Data
3	–
4	Ground (SD)
5	5VDC
–	Ground (FG)

Table 12-11. Keyboard DIN Connector Pin Configuration

In addition to using the alphabetic and numeric keys on the IBM PC/AT keyboard to enter information such as part name, part number, address, etc, the IBM PC/AT keyboard can also be used to control other scale functions. The IBM PC/AT keyboard is mapped to the scale functions as follows:

DC-200/300 Function	IBM PC/AT Keyboard
Alphabetic key	Alphabetic key
Numeric key	Numeric key
SPACE BAR	SPACE
CODE	F3
PRINT SCREEN	*
/	/ (10 KEY)
+	+ (10 KEY)
–	– (10 KEY)
ENTER	*ENTER/PRINT
CLEAR	BACKSPACE
<<	<–
>>	–>
INSERT	INSERT
DELETE	DELETE

Table 12-12. IBM Keyboard Function Mapping

12.4 Connecting a Barcode Scanner

The DC-200/300 will accept a barcode scanner connected either to a RS232C port (RS232 scanner) or to the IBM keyboard port (wedge scanner that emulates a keyboard). In order to use a scanner, you must set the Customer Specifications of the DC-200/300 scale to recognize the scanner, connect the scanner to the appropriate port and, in some cases, do the setup on the scanner required by the scanner manufacturer.

12.4.1 Header Codes

Data can be input with headers or without them. The following header codes are the ones recognized by the DC-200/300:

Header Code	ASCII Code	Data
1	31	Unit Weight
2	32	Quantity
3	33	ID Code
4	34	Tare Weight
A	41	Gross Weight
E	45	Lot Number
F	46	Set Point 1 (Weight)
G	47	Setpoint 1 (Quantity)
H	48	Setpoint 2
I	49	Total Quantity
K	4B	Inventory
M	4D	Part Number
N	4E	Part Name

Table 12-13. Barcode Header Codes

With headers, the bar code data is received as follows:

Header	Data	CR (carriage return)

Without headers, the bar code data is received as follows:

Data	CR (carriage return)

The DC-200/300 also supports the reading of three-line barcodes. the barcodes must have the headers shown in Table 12-13 above and be in the following format:

Line 1: Space	Header	Data1	CR (carriage return)
Line 2: Space	Data2	CR (carriage return)	
Line 3: Data3	CR (carriage return)		

To configure the DC-200/300 to recognize barcodes with or without headers, set SPEC 37: BAR CODE SCANNER (BCS) WITH HEADER to either *0:Enable* or *1:Disable*.

Note: *For instructions on how to set the DC-200/300's customer specifications, refer to Table 3.1.1.*

12.4.2 Z Commands via Barcodes

You can also scan barcode representations of the scale's Z commands. This allows the scale operator to use the scanner to initiate certain scanner functions:

Z Command	Function
Z0	Rezero
Z1	Print
Z2	Unit Weight Clear
Z3	Plus
Z4	Minus
Z5	Tare
Z6	Clear
ZS1	Scale 1
ZS2	Scale 2
ZS3	Scale 3
ZS4	Scale 4

Table 12-14. Z Command Functions

12.4.3 Configuring the RS232C Port for a Scanner

An RS232C scanner must be connected to the main port (next to the keyboard port). The spec settings should be as follows:

Note: *For instructions on how to set the DC-200/300's customer specifications, refer to Section 3.1.1.*

- SPEC 15: SIO Select job to 3:BARCODE SCANNER
- SPEC 16: Baud Rates (SIO) to the proper baud rate for your scanner
- SPEC 17: Data Length (SIO) to the proper length for your scanner
- SPEC 18: Parity Bit (SIO) to the proper setting for your scanner
- SPEC 19: Stop Bit (SIO) to the proper setting for your scanner
- SPEC 38: BAR CODE SCANNER (BCS) WITH HEADER to *0:Enable* or *1:Disable* depending on whether the barcodes you are scanning have headers or not (see Header Codes above).

12.4.4 Connecting the Scanner to the RS232C Port

Pin Number	Signal
2	GND
4	RXD
5	TXD
7	RTS
1	CTS
8	VCC

Table 12-15. Pin Configuration for Barcode Scanner RS232C Connection

12.4.5 Configuring the Keyboard Port for a Scanner

A wedge scanner (a type of scanner which emulates a keyboard) can be connected to the IBM KEYBRD port. If you choose this option, the spec settings should be as follows:

Note: *For instructions on how to set the DC-200/300's customer specifications, refer to Section 3.1.1.*

- SPEC 37: IBM KEYBOARD PORT to 0:Barcode Scanner
- SPEC 38: BAR CODE SCANNER (BCS) WITH HEADER to *0:Enable* or *1:Disable* depending on whether the barcodes you are scanning have headers or not (see Header Codes above).

12.4.6 Programming the QSC-6000 Plus Quickscan RS232C Scanner

If you are using the Quickscan RS232C barcode scanner sold by Rice Lake Weighing Systems for DIGI scales, scan the following bar codes to set the scanner for proper communication with the DC-200/300.

1. Set to RS232 default values and enable RS232 interface

Warning: use this barcode with caution because it will clear any features you may have programmed since the scanner's installation and reset them all to the defaults.

RETURN TO FACTORY

2. Program communication settings
   Parity = Even
   Stop Bits = 1
   Data Bits = 7

Set

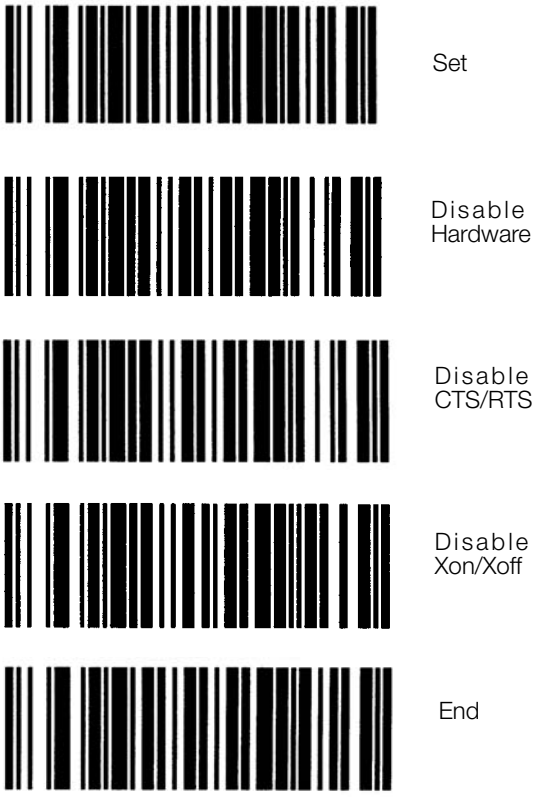
Even Parity

One
Stop Bit

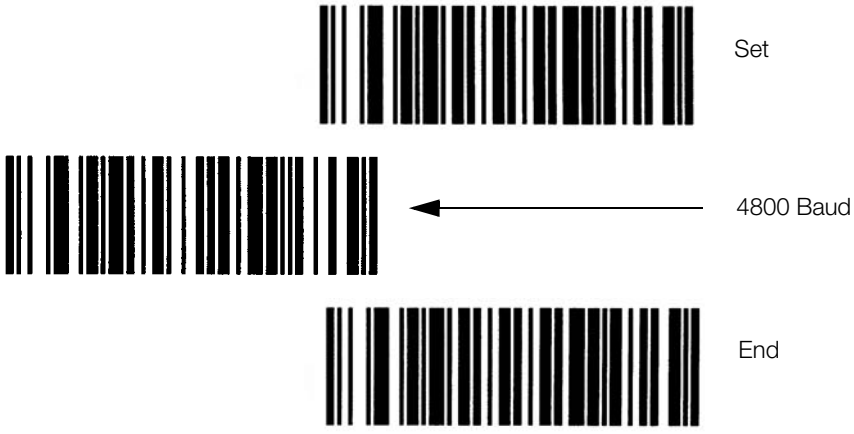
7 Data
Bits

End

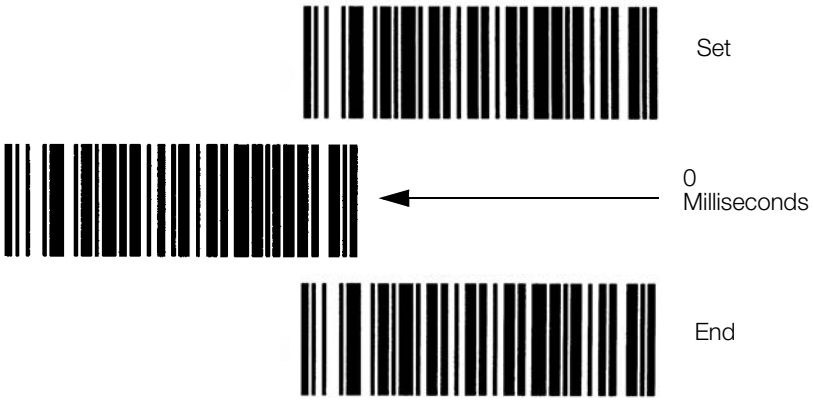
3. Set Handshaking Requirements
   Disable hardware handshaking
   Disable CTS/RTS flow control
   Disable XON/XOFF
      software handshaking



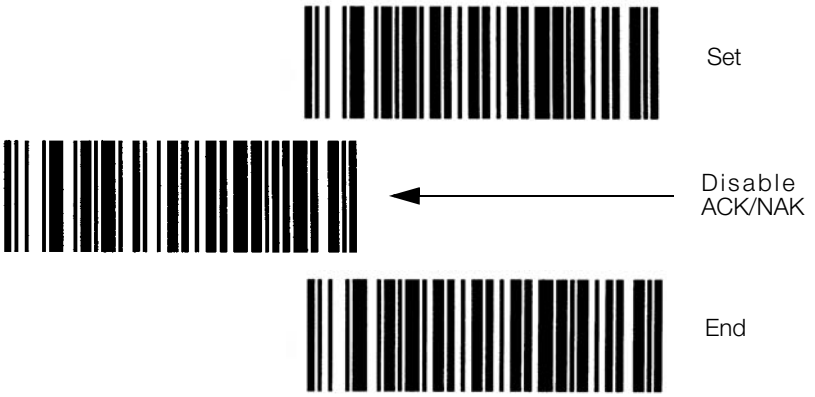
4. Set Baud Rate
   4800 baud



5. Set Interchange Delay
0 milliseconds

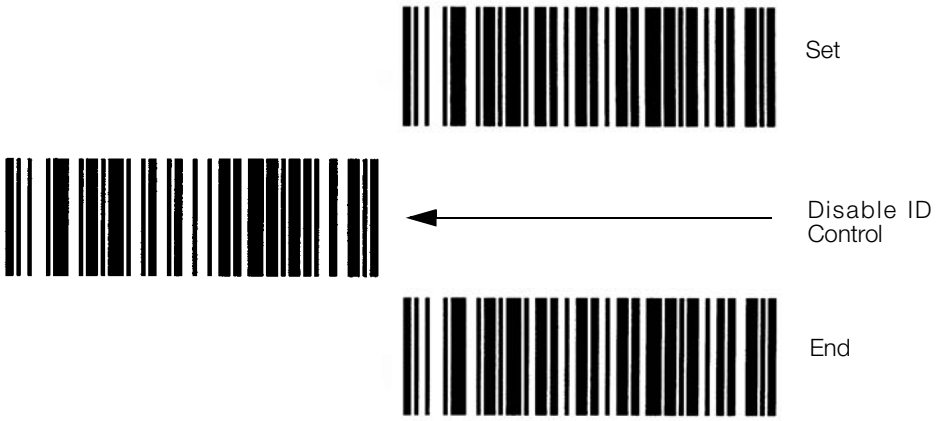


6. Disable ACK/NAK

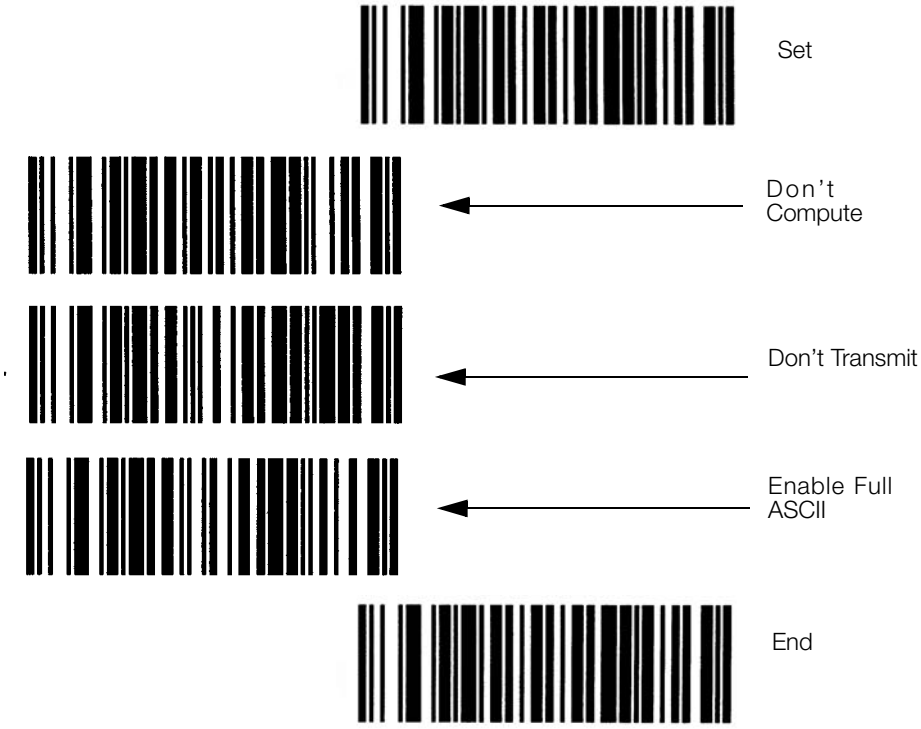


7. Set Suffix
Suffix = 0
Suffix = D

8. Set Label ID
disable ID control



9. Set Check Digit
don't compute check digit
don't transmit check digit



10. Set Label Length
set minimum length
set length = 0

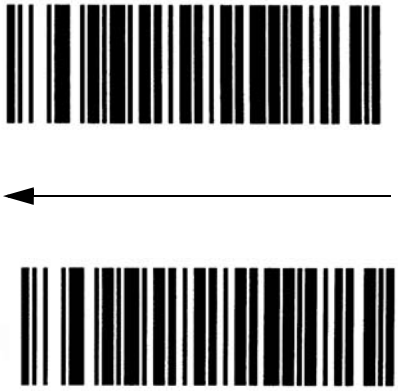
12.4.7 Programming the QuickScan Keyboard Wedge Scanner

If you are using the Quickscan keyboard wedge barcode scanner connected to the IBM keyboard port, scan the following barcodes to set up your scanner to communicate with the DC-200/300.

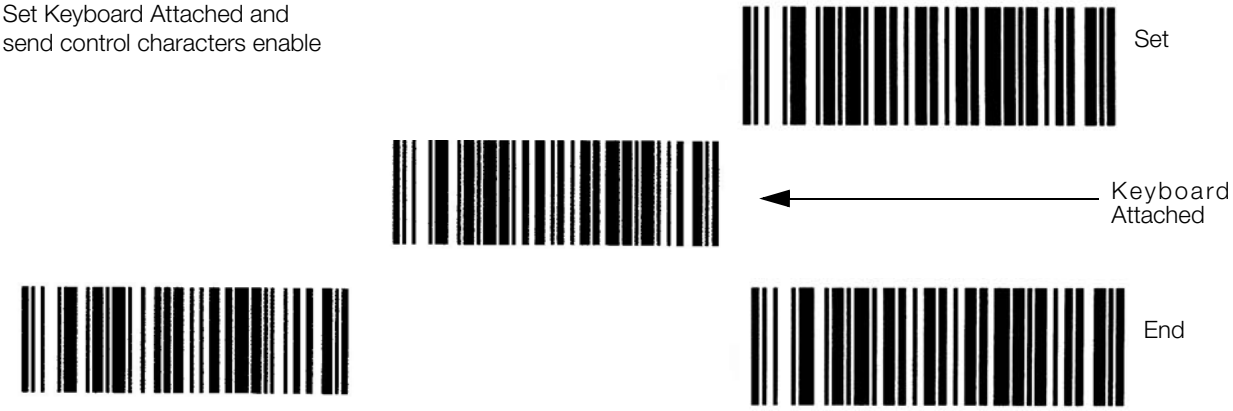
1. Set to RS232 Default Values

warning: use this barcode with caution because it will clear any features you may have programmed since the scanner's installation and reset them all to the defaults.

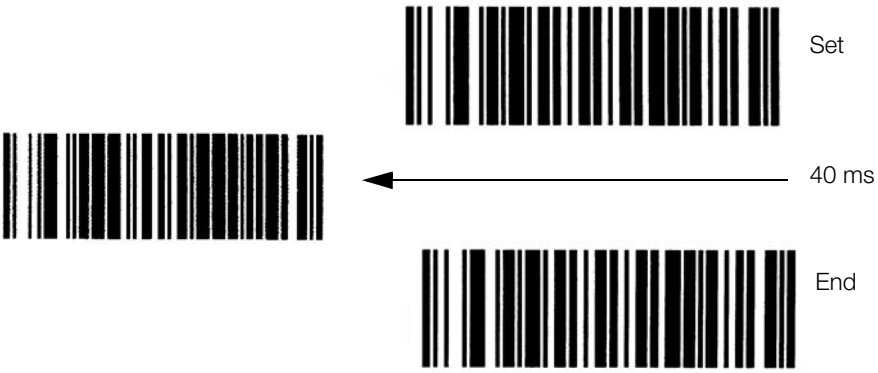
2. Set Keyboard Type to "E" (AT, PS2 W/US Keyboard)



3. Set Keyboard Attached and send control characters enable



4. Set Interchange Delay (40 milliseconds)



12.5 Label Formatting Worksheets (DC-300 only)

The following worksheets are intended to help design and program free format labels by modifying existing formats. The worksheets can be photocopied and then filled out to simplify data entry of the format into the scale (see Section 7.5.5).

Each worksheet is divided into four sections:

- Print items that appear only on the item label
- Print items that appear only on the total label
- Space for print items that are not currently part of the label format that you are using as a template, but that you want to add to your custom format.

Format A1

Format being copied and modified: A1

New free format number: F_____

Label size: 56mm (W) x 28mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	A1	new	A1	new	A1	new	A1	new	A1	new	A1	new	A1	new
ID Code	0		33		0		56		7		2		M5	
Part Number	0		21		0		56		5		2		M2	
Part Name	0		27		0		56		5		2		M2	
Lot Number	0		15		0		56		5		0		M2	
Gross Weight	14		15		0						1		M3	
Unit Weight	41		11		0						1		M3	
Net Weight	14		11		0						1		M3	
Tare Weight	41		15		0						1		M3	
Quantity	28		0		0						2		M5	
Packed Date	0		0		0						2		M2	
Packed Time	13		0		0						2		M2	
Quantity Unit Symbol	51		0		0						2		M1	
Factory Name	0		46		0		56		9		2		S4	
Text 2	32		11		0		6		4		1		M3	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	A1	new	A1	new	A1	new	A1	new	A1	new	A1	new	A1	new
Total Packed Date	0		0		0						2		M2	
Total Quantity	28		0		0						2		M5	
Total Quantity Unit Symbol	51		0		0						2		M1	
Total Packed Time	13		0		0						2		M2	
Total Quantity Title	19		5		0						2		S4	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	A1	new	A1	new	A1	new	A1	new	A1	new	A1	new	A1	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format B2

Format being copied and modified: B2
New Free Format Number: F_____
Label Size: 56 mm (W) x 31 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	B2	new	B2	new	B2	new	B2	new	B2	new	B2	new	B2	new
ID Code	0		33		0		56		7		2		M5	
Part Name	0		27		0		56		5		2		M2	
Part Number	0		21		0		56		5		2		M2	
Lot Number	0		15		0		56		5		2		M2	
Unit Weight	41		11		0						1		M3	
Net Weight	18		11		0						1		M3	
Quantity	28		0		0						2		M5	
Packed Time	13		0		0						2		M2	
Quantity Unit Symbol	51		0		0						2		M1	
Factory Name	0		46		0		56		9		2		S4	
Text 1	36		11		0		56		7		0			
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	B2	new	B2	new	B2	new	B2	new	B2	new	B2	new	B2	new
Total Packed Date	1		10		0						2		S5	
Total Quantity	28		0		0						2		M5	
Total Quantity Unit Symbol	51		0		0						2		M2	
Total Packed Time	14		10		0						2		S5	
Total Quantity Title	10		2		0						2		M4	
Total Quantity Barcode	27		11		0		56		7		2			
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	B2	new	B2	new	B2	new	B2	new	B2	new	B2	new	B2	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation
Print Status: 0-Nonprint; 1-Weight Print; 2-All Print
Character Size: See Table 7.1 for character sizes available

Format C3

Format being copied and modified: C3
New Free Format Number: F_____
Label Size: 56 mm (W) x 34 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	C3	new	C3	new	C3	new	C3	new	C3	new	C3	new	C3	new
ID Code	0		25		0		56		5		2		M3	
Part Name	0		22		0		56		4		2		M1	
Part Number	0		18		0		56		4		2		M1	
Lot Number	0		14		0		56		4		2		M1	
Unit Weight	41		11		0						1		M2	
Net Weight	18		11		0						1		M2	
Quantity	28		0		0						2		M5	
Packed Time	13		0		0						2		M2	
Quantity Unit Symbol	51		0		0						2		M1	
ID Code Barcode	2		31		0		0		8		2			
Factory Name	0		46		0		56		9		2		S4	
Text 1	36		11		0		4		4		1			

Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	C3	new	C3	new	C3	new	C3	new	C3	new	C3	new	C3	new
Total Quantity	28		0		0						2		M5	
Total Quantity Unit Symbol	51		0		0						2		M2	
Total Packed Time	14		10		0						2		S5	
Total Quantity Title	10		2		0						2		M4	

Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	C3	new	C3	new	C3	new	C3	new	C3	new	C3	new	C3	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation
Print Status: 0-Nonprint; 1-Weight Print; 2-All Print
Character Size: See Table 7.1 for character sizes available

Format U2-4

Format being copied and modified: U2-4

New Free Format Number: F_____

Label Size: 56 mm (W) x 40 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new
ID Code	21		30		0		34		4		2		M2	
Part Name	21		24		0		32		6		2		M1	
Part Number	21		18		0		32		6		2		M1	
Lot Number	21		12		0		32		6		2		M1	
ID Code Total	4		32		0						2		M2	
Part Name Title	4		27		0						2		M2	
Part Number Title	4		21		0						2		M2	
Lot Number Title	4		15		0						2		M2	
Unit Weight	42		8		0						1		M2	
Net Weight	19		8		0						1		M2	
Quantity	28		0		0						2		M5	
Packed Time	13		0		0						2		M2	
Quantity Unit Symbol	51		0		0						2		M1	
ID Code Barcode	2		35		0		0		6		2			
Factory Name	0		46		0		56		9		2		S4	
Text 1	37		8		0		4		4		1		m3	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new
Total Quantity	28		0		0						2		M5	
Total Quantity Unit Symbol	51		0		0						2		M1	
Total Packed Time	13		0		0						2		M2	
Total Quantity Title	19		4		0						2		S4	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new	U2-4	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format U3-5

Format being copied and modified: U3-5

New Free Format Number: F_____

Label Size: 56 mm (W) x 43 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new
ID Code	0		49		0		56		7		2		M5	
Part Name	0		38		0		55		10		2		M3	
Part Number	0		28		0		55		10		2		M3	
Lot Number	0		18		0		55		10		2		M3	
Unit Weight	40		13		0						1		M4	
Net Weight	17		13		0						1		M4	
Quantity	28		0		0						2		M5	
Packed Time	13		0		0						2		M2	
Quantity Unit Symbol	51		0		0						2		M1	
ID Code Barcode	2		62		0		0		15		2			
Factory Name	0		86		0		56		9		2		S4	
Text 1	35		13		0		4		4		1		M3	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new
Total Quantity	28		0		0						2		M5	
Total Quantity Unit Symbol	51		0		0						2		M1	
Total Packed Time	13		0		0						2		M2	
Total Quantity Title	19		5		0						2		S5	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new	U3-5	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format U4-6

Format being copied and modified: U4-6

New Free Format Number: F_____

Label Size: 56 mm (W) x 46 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new
ID Code	37		77		3		74		7		2		M5	
Part Name	30		77		3		74		5		2		M3	
Part Number	23		77		3		74		5		2		M3	
Lot Number	17		77		3		74		5		2		M3	
Unit Weight	12		15		3						1		M3	
Net Weight	12		55		3						1		M3	
Quantity	1		28		3						2		M5	
Packed Time	1		50		3						2		M2	
Packed Date	1		65		3						2		M2	
Quantity Unit Symbol	1		6		3						2		M1	
ID Code Barcode	46		77		3		0		10		2			
Factory Name	0		86		0		56		9		2		S4	
Text 1	12		25		3		4		4		1		M3	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new
Total Packed Date	1		65		3						2		M2	
Total Quantity	1		28		3						2		M5	
Total Quantity Unit Symbol	1		6		3						2		M1	
Total Packed Time	1		50		3						2		M2	
Total Quantity Title	5		38		3						2		S5	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new	U4-6	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format U5-7

Format being copied and modified: U5-7

New Free Format Number: F_____

Label Size: 56 mm (W) x 49 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new
ID Code	21		51		0		34		7		2		M5	
Part Name	21		39		0		32		11		2		M4	
Part Number	21		27		0		32		11		2		M4	
Lot Number	21		16		0		32		11		2		M4	
ID Code Title	4		54		0						2		M4	
Part Name Title	4		45		0						2		M4	
Part Number Title	4		33		0						2		M4	
Lot Number Title	4		21		0						2		M4	
Unit Weight	41		10		0						1		M4	
Net Weight	19		10		0						1		M4	
Quantity	28		0		0						2		M5	
Packed Time	13		0		0						2		M2	
Quantity Unit Symbol	51		0		0						2		M1	
ID Code Barcode	2		60		0		0		14		2			
Factory Name	0		86		0		56		9		2		S4	
Text 1	37		11		0		48		4		1		M3	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new
Total Quantity	28		0		0						2		M5	
Total Quantity Unit Symbol	51		0		0						2		M1	
Total Packed Time	13		0		0						2		M2	
Total Quantity Title	19		4		0						2		S5	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new	U5-7	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format U6-8

Format being copied and modified: U6-8

New Free Format Number: F_____

Label Size: 56 mm (W) x 55 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new
ID Code	40		50		3		52		8		2		M5	
Part Name	8		66		3		20		4		2		S3	
Part Number	4		66		3		20		4		2		S3	
Lot Number	0		66		3		46		3		2		S3	
ID Code Title	43		78		3		0		0		2		M4	
Part Name Title	11		78		3						2		S3	
Part Number Title	6		70		3						2		S3	
Lot Number Title	2		70		3						2		S3	
Gross Weight	27		61		3						1		M2	
Unit Weight	31		61		3						1		M2	
Net Weight	23		61		3						1		M2	
Tare Weight	19		61		3						1		M2	
Quantity	35		59		3						2		M4	
Packed Date	14		78		3						2		M2	
Packed Time	14		61		3						2		M2	
Quantity Barcode	32		34		3		0		9		2			
Tare Weight Barcode	10		34		3		0		9		2			
Barcode (U/Wt)	21		34		3		0		9		2			
ID Code Barcode	48		77		3		0		8		2			
Factory Name	0		86		0		56		9		2		S4	
Text 2	23		41		3		7		4		2		M3	
Text 3	35		78		3		5		7		2		M4	
Text 4	34		41		3		7		4		2		M3	
Text 5	12		43		3		4		9		2		M3	
Text 6	30		78		3		13		5		1		M2	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new
Total Packed Date	14		78		3						2		M2	
Total Quantity	35		59		3						2		M4	
Total Quantity Unit Symbol	1		6		0						0		M1	
Total Packed Time	14		61		3						2		M2	
Total Quantity Title	35		64		3						2		M2	
Total Quantity Barcode	27		34		3		0		9		2			
Text 17	35		78		3		5		7		2		M4	
Text 18	34		41		3		4		7		2		M3	

Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new	U6-8	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format U7-9

Format being copied and modified: U7-9

New Free Format Number: F_____

Label Size: 56 mm (W) x 37 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new
ID Code	0		66		0		56		7		2		M5	
Part Name	0		53		0		56		11		2		M4	
Part Number	0		40		0		56		11		2		M4	
Lot Number	0		27		0		56		11		2		M4	
Gross Weight	11		23		0						1		M3	
Unit Weight	41		17		0						1		M3	
Net Weight	13		17		0						1		M3	
Tare Weight	41		23		0						1		M3	
Quantity	28		1		0						2		M5	
Packed Date	0		1		0						2		M2	
Packed Time	13		1		0						2		M2	
Quantity Unit Symbol	51		1		0						2		M1	
Barcode ID Code	2		77		0		20		0		2			
Factory Name	0		111		0		56		9		2		S4	
Text 2	32		16		0		4		6		1		M3	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new
Total Packed Date	0		1		0						2		M2	
Total Quantity	28		1		0						2		M2	
Total Quantity Unit Symbol	51		1		0						2		M1	
Total Packed Time	13		1		0						2		M2	
Total Quantity Title	19		5		0						2		S5	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new	U7-9	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format U8-10

Format being copied and modified: U8-10

New Free Format Number: F_____

Label Size: 56 mm (W) x 40 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new
ID Code	38		97		3		83		8		2		M5	
Part Name	31		97		3		79		7		2		M4	
Part Number	24		97		3		79		7		2		M4	
Lot Number	17		97		3		79		7		2		M4	
Unit Weight	12		15		3						1		M3	
Net Weight	12		55		3						1		M3	
Quantity	1		28		3						2		M5	
Packed Date	1		65		3						2		M2	
Packed Time	1		50		3						2		M2	
Quantity Unit Symbol	1		6		3						2		M1	
Barcode (ID Code)	47		97		3		9		0		2			
Factory Name	0		111		0		56		9		2		S4	
Text 1	12		25		3		4		4		1		M3	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new
Total Packed Date	1		65		3						2		M2	
Total Quantity	1		28		3						2		M5	
Total Quantity Unit Symbol	1		6		3						2		M1	
Total Packed Time	1		50		3						2		M2	
Total Quantity Title	5		38		3						2		S5	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new	U8-10	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format T5-11

Format being copied and modified: T5-11

New Free Format Number: F_____

Label Size: 56 mm (W) x 43 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new
ID Code	21		64		0		34		8		2		M5	
Part Name	21		50		0		33		12		2		M4	
Part Number	21		38		0		33		12		2		M4	
Lot Number	21		26		0		33		12		2		M4	
ID Code Title	3		69		0						2		M4	
Part Name Title	3		59		0						2		M4	
Part No. Title	3		47		0						2		M4	
Lot No. Title	3		35		0						2		M4	
Gross Weight	13		23		0						1		M3	
Unit Weight	41		17		0						1		M3	
Net Weight	13		17		0						1		M3	
Tare Weight	41		13		0						1		M3	
Quantity	28		1		0						2		M5	
Packed Date	0		1		0						2		M2	
Packed Time	13		1		0						2		M2	
Quantity Unit Symbol	51		1		0						2		M1	
Barcode (ID Code)	2		77		0		20		0		2			
Factory Name	0		111		0		20		0		2		S4	
Text 1	35		16		0		4		4		1		M5	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new
Total Packed Date	0		1		0						2		M2	
Total Quantity	28		1		0						2		M2	
Total Quantity Unit Symbol	28		1		0						2		M5	
Total Packed Time	13		1		0						2		M2	
Total Quantity Title	19		5		0						2		S5	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new	T5-11	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format T6-12

Format being copied and modified: T6-12

New Free Format Number: F_____

Label Size: 56 mm (W) x 49 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new
ID Code	40		80		3		74		8		2		M5	
Part Name	8		88		3		20		4		2		S3	
Part Number	4		88		3		20		4		2		S3	
Lot Number	0		88		3		46		3		2		S3	
ID Code Title	43		100		3						2		M4	
Part Name Title	11		100		3						2		S3	
Part Number Title	6		100		3						2		S3	
Lot No. Title	2		100		3						2		S3	
Gross Weight	27		82		3						1		M2	
Packed Date	14		100		3						2		M2	
Net Weight	23		82		3						1		M2	
Tare Weight	19		82		3						1		M2	
Quantity	35		78		3						2		M4	
Unit Weight	31		82		3						1		M2	
Packed Time	14		82		3						2		M2	
Quantity Barcode	32		46		3		0		9		2			
Tare Weight Barcode	10		46		3		0		9		2			
Barcode (U/Wt)	21		46		3		9		0		2			
Barcode (ID Code)	40		100		3		0		8		2			
Factory Name	0		111		0		9		56		2		S4	
Text 2	23		55		3		7		4		2		M3	
Text 3	35		100		3		7		5		2		M4	
Text 4	34		55		3		7		4		2		M3	
Text 5	12		57		3		4		9		2		M3	
Text 6	30		100		3		13		5		1		M2	
Total Label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new
Total Packed Date	14		100		3						2		M2	
Total Quantity	35		78		3						2		M4	
Total Packed Time	14		82		3						2		M2	
Total Quantity Title	35		86		3						2		M2	
Total Quantity Barcode	32		46		3		9		0		2			
Text 17	35		100		3		5		7		2		M4	
Text 18	34		55		3		4		7		2		M3	
Print Items You Want to Add to the Free Format														

Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new	T6-12	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format T8-14

Format being copied and modified: T8-14

New Free Format Number: F_____

Label Size: 37 mm (W) x 46 mm (H)

Item and Total Label Formats														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T8-14	new	T8-14	new	T8-14	new	T8-14	new	T8-14	new	T8-14	new	T8-14	new
Tare Weight	35		65		3						2		M5	
Tare Weight Barcode	6		85		3		0		27		2			
Factory Name	8		38		0		28		8		2		S4	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T8-14	new	T8-14	new	T8-14	new	T8-14	new	T8-14	new	T8-14	new	T8-14	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format T9-15

Format being copied and modified: T9-15

New Free Format Number: F_____

Label Size: 37 mm (W) x 46 mm (H)

Item and Total Label Formats														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T9-15	new	T9-15	new	T9-15	new	T9-15	new	T9-15	new	T9-15	new	T9-15	new
Unit Weight	35		85		3						2		M5	
Barcode (U/Wt)	6		85		3		0		27		2			
Factory Name	0		111		0		56		9		2		S4	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T9-15	new	T9-15	new	T9-15	new	T9-15	new	T9-15	new	T9-15	new	T9-15	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format T10-16

Format being copied and modified: T10-16

New Free Format Number: F_____

Label Size: 37 mm (W) x 62 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T10-16	new	T10-16	new	T10-16	new	T10-16	new	T10-16	new	T10-16	new	T10-16	new
ID Code	40		80		3		74		8		2		M5	
ID Code Title	43		100		3						2		M4	
Quantity	35		70		3						2		M4	
Quantity Barcode	32		46		3		9		0		2			
Barcode (ID Code)	40		100		3		8		0		2			
Factory Name	0		111		0		56		9		2		S4	
Address	1		90		3		56		28		2		M4	
Text 3	35		100		3		7		5		2		M4	
Text 4	34		55		3		7		4		2		M3	
Total Quantity	35		78		3						2		M4	
Total Quantity Title	35		86		3						2		M2	
Total Quantity Barcode	32		46		3		9		0		2			
Text 17	35		100		3		7		5		2		M4	
Text 18	34		55		3		7		4		2		M3	
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T10-16	new	T10-16	new	T10-16	new	T10-16	new	T10-16	new	T10-16	new	T10-16	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

Format T7-13

Format being copied and modified: T7-13

New Free Format Number: F_____

Label Size: 37 mm (W) x 28 mm (H)

Item label Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T7-13	new	T7-13	new	T7-13	new	T7-13	new	T7-13	new	T7-13	new	T7-13	new
ID Code	35		90		3		74		11		2		M5	
ID Code Barcode	6		90		3		27		0		2			
Factory Name	8		20		0		28		8		2		S4	
Total Quantity Barcode	27		11		0		56		7		0			
Print Items You Want to Add to the Free Format														
Print Item	X-Position (mm)		Y-Position (mm)		Angle (degree)		Width (mm)		Height (mm)		Print Status		Character Size	
	T7-13	new	T7-13	new	T7-13	new	T7-13	new	T7-13	new	T7-13	new	T7-13	new

Angle: 0-0 degrees 1 - 90 degree rotation, 2- 180 degree rotation, 3-270 degree rotation

Print Status: 0-Nonprint; 1-Weight Print; 2-All Print

Character Size: See Table 7.1 for character sizes available

12.6 Character Code Tables

These tables can be used together with the **SHIFT UP** + **V** (CHAR TYPE) keys to enter characters not available directly from the DC-200/300's alphanumeric keyboard and numeric keypad.

12.6.1 ASCII Code

The DC-200/300 can send or receive any ASCII character value but, due to limitations of the scale display, some characters cannot be shown on the screen. To enter an ASCII character in a text field that will support it (ex. Part Name) enter the Hex code corresponding to the ASCII character you want. Use the decimal values for ASCII characters listed below when specifying print format strings under the DC-200/300 blank menu.The actual character printed depends on the character mapping used by the output device.

Control	ASCII	Dec	Hex	ASCII	Dec	Hex	ASCII	Dec	Hex	ASCII	Dec	Hex
Ctrl-@	NUL	00	00	space	32	20	@	64	40	`	96	60
Ctrl-A	SOH	01	01	!	33	21	A	65	41	a	97	61
Ctrl-B	STX	02	02	“	34	22	B	66	42	b	98	62
Ctrl-C	ETX	03	03	#	35	23	C	67	43	c	99	63
Ctrl-D	EOT	04	04	$	36	24	D	68	44	d	100	64
Ctrl-E	ENQ	05	05	%	37	25	E	69	45	e	101	65
Ctrl-F	ACK	06	06	&	38	26	F	70	46	f	102	66
Ctrl-G	BEL	07	07	’	39	27	G	71	47	g	103	67
Ctrl-H	BS	08	08	(	40	28	H	72	48	h	104	68
Ctrl-I	HT	09	09	)	41	29	I	73	49	i	105	69
Ctrl-J	LF	10	0A	*	42	2A	J	74	4A	j	106	6A
Ctrl-K	VT	11	0B	+	43	2B	K	75	4B	k	107	6B
Ctrl-L	FF	12	0C	,	44	2C	L	76	4C	l	108	6C
Ctrl-M	CR	13	0D	-	45	2D	M	77	4D	m	109	6D
Ctrl-N	SO	14	0E	.	46	2E	N	78	4E	n	110	6E
Ctrl-O	SI	15	0F	/	47	2F	O	79	4F	o	111	6F
Ctrl-P	DLE	16	10	0	48	30	P	80	50	p	112	70
Ctrl-Q	DC1	17	11	1	49	31	Q	81	51	q	113	71
Ctrl-R	DC2	18	12	2	50	32	R	82	52	r	114	72
Ctrl-S	DC3	19	13	3	51	33	S	83	53	s	115	73
Ctrl-T	DC4	20	14	4	52	34	T	84	54	t	116	74
Ctrl-U	NAK	21	15	5	53	35	U	85	55	u	117	75
Ctrl-V	SYN	22	16	6	54	36	V	86	56	v	118	76
Ctrl-W	ETB	23	17	7	55	37	W	87	57	w	119	77
Ctrl-X	CAN	24	18	8	56	38	X	88	58	x	120	78
Ctrl-Y	EM	25	19	9	57	39	Y	89	59	y	121	79
Ctrl-Z	SUB	26	1A	:	58	3A	Z	90	5A	z	122	7A
Ctrl-[	ESC	27	1B	;	59	3B	[	91	5B	{	123	7B
Ctrl-\	FS	28	1C	<	60	3C	\	92	5C	|	124	7C
Ctrl-]	GS	29	1D	=	61	3D	]	93	5D	}	125	7D
Ctrl-^	RS	30	1E	>	62	3E	^	94	5E	~	126	
Ctrl-_	US	31	1F	?	63	3F	_	95	5F	DEL	127	

Table 12-16. ASCII Character Chart (Part 1)

ASCII	Dec	Hex	ASCII	Dec	Hex	ASCII	Dec	Hex	ASCII	Dec	Hex
Ctrl-^	RS	30	1E	>	62	3E	^	94	5E	~	126
Ctrl-_	US	31	1F	?	63	3F	_	95	5F	DEL	127
Ç	128	80	á	160	A0		192	C0	α	224	E0
ü	129	81	í	161	A1		193	C1	β	225	E1
é	130	82	ó	162	A2		194	C2	Γ	226	E2
â	131	83	ú	163	A3		195	C3	π	227	E3
ä	132	84	ñ	164	A4		196	C4	Σ	228	E4
à	133	85	Ñ	165	A5		197	C5	σ	229	E5
å	134	86	ª	166	A6		198	C6	µ	230	E6
ç	135	87	º	167	A7		199	C7	τ	231	E7
ê	136	88	¿	168	A8		200	C8	Φ	232	E8
ë	137	89		169	A9		201	C9	Θ	233	E9
è	138	8A	¬	170	AA		202	CA	Ω	234	EA
ï	139	8B	1/2	171	AB		203	CB	δ	235	EB
î	140	8C	1/4	172	AC		204	CC	∞	236	EC
ì	141	8D	¡	173	AD		205	CD	ϕ	237	ED
Ä	142	8E	«	174	AE		206	CE	∈	238	EE
Å	143	8F	»	175	AF		207	CF	∩	239	EF
É	144	90		176	B0		208	D0	≡	240	F0
æ	145	91		177	B1		209	D1	±	241	F1
Æ	146	92		178	B2		210	D2	≥	242	F2
ô	147	93		179	B3		211	D3	≤	243	F3
ö	148	94		180	B4		212	D4	⌠	244	F4
ò	149	95		181	B5		213	D5	⌡	245	F5
û	150	96		182	B6		214	D6	÷	246	F6
ù	151	97		183	B7		215	D7	≈	247	F7
ÿ	152	98		184	B8		216	D8	°	248	F8
Ö	153	99		185	B9		217	D9	•	249	F9
Ü	154	9A		186	BA		218	DA		250	FA
¢	155	9B		187	BB		219	DB		251	FB
£	156	9C		188	BC		220	DC		252	FC
¥	157	9D		189	BD		221	DD	2	253	FD
Pts	158	9E		190	BE		222	DE		254	FE
ƒ	159	9F		191	BF		223	DF		255	FF

Table 12-17. ASCII Character Chart (Part 2)

12.6.2 Teraoka Codes

To enter an character from the Teraoka Code Table in a text field that will support it (ex. Part Name, Part Number, Factory Name, Address, Text Field) enter the numeric value corresponding to the character you want.

SPACE	A	B	C	D	E	F	G	H	I
00	01	02	03	04	05	06	07	08	09
J	K	L	M	N	O	P	Q	R	S
10	11	12	13	14	15	16	17	18	19
T	U	V	W	X	Y	Z	,	.	-
20	21	22	23	24	25	26	27	28	29
0	1	2	3	4	5	6	7	8	9
30	31	32	33	34	35	36	37	38	39
@	!	“	#	$	%	&	/	(	)
40	41	42	42	44	45	46	47	48	49
‘	<	>	+	:	*	À	Â	È	Ê
50	58	59	69	72	73	77	78	79	80
É	Ô	Ç	?	→	←				
81	82	83	96	97	98				

Table 12-18. Teraoka Codes

13.0 DC-200/300 Limited Warranty

Rice Lake Weighing Systems (RLWS) warrants that all RLWS equipment and systems properly installed by a Distributor or Original Equipment Manufacturer (OEM) will operate per written specifications as confirmed by the Distributor/OEM and accepted by RLWS. All systems and components are warranted against defects in materials and workmanship for one year.

RLWS warrants that the equipment sold hereunder will conform to the current written specifications authorized by RLWS. RLWS warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, RLWS will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

- Upon discovery by Buyer of such nonconformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Individual electronic components returned to RLWS for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in a publication, *Protecting Your Components From Static Damage in Shipment*, available from RLWS Equipment Return Department.
- Examination of such equipment by RLWS confirms that the nonconformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair or improper testing; RLWS shall be the sole judge of all alleged non-conformities.
- Such equipment has not been modified, altered, or changed by any person other than RLWS or its duly authorized repair agents.
- RLWS will have a reasonable time to repair or replace the defective equipment. Buyer is responsible for shipping charges both ways.
- In no event will RLWS be responsible for travel time or on-location repairs, including assembly or disassembly of equipment, nor will RLWS be liable for the cost of any repairs made by others.

THESE WARRANTIES EXCLUDE ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEITHER RLWS NOR DISTRIBUTOR WILL, IN ANY EVENT, BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

RLWS AND BUYER AGREE THAT RLWS'S SOLE AND EXCLUSIVE LIABILITY HEREUNDER IS LIMITED TO REPAIR OR REPLACEMENT OF SUCH GOODS. IN ACCEPTING THIS WARRANTY, THE BUYER WAIVES ANY AND ALL OTHER CLAIMS TO WARRANTY.

SHOULD THE SELLER BE OTHER THAN RLWS, THE BUYER AGREES TO LOOK ONLY TO THE SELLER FOR WARRANTY CLAIMS.

NO TERMS, CONDITIONS, UNDERSTANDING, OR AGREEMENTS PURPORTING TO MODIFY THE TERMS OF THIS WARRANTY SHALL HAVE ANY LEGAL EFFECT UNLESS MADE IN WRITING AND SIGNED BY A CORPORATE OFFICER OF RLWS AND THE BUYER.

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